EXHIBIT 1

REPORT OF ORLEY ASHENFELTER

IN CONNECTION WITH

COLON et al.

v.

NATIONAL COLLEGIATE ATHLETIC ASSOCIATION

CASE NO. 1:23-cv-00425-WBS

November 1, 2024

Corrected: November 26, 2024

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I. Introduction

A. Qualifications

1. I am the Joseph Douglas Green 1895 Professor of Economics Emeritus at Princeton University. I am the former President of the American Economic Association and the former President of the American Law and Economics Association. I am a recipient of the IZA Prize in Labor Economics and the Mincer Award for Lifetime Achievement of the Society of Labor Economists. I am a Fellow of the Econometric Society, a Fellow of the American Academy of Arts and Sciences, a Fellow of the Society of Labor Economics, a Corresponding Fellow of the Royal Society of Edinburgh, and a Distinguished Fellow of the American Economic Association. My areas of specialization include labor economics, industrial organization, econometrics, and law and economics. I was previously the Director of the Industrial Relations Section at Princeton University, and I have been Director of the Office of Evaluation of the U.S. Department of Labor, a Guggenheim Fellow, and the Benjamin Meeker Visiting Professor at the University of Bristol. I edited the *Handbook of Labor Economics* and I was a previous editor of the *American Economic Review* and a previous co-editor of the *American Law and Economics Review*. My curriculum vitae and a list of my testimony in the last four years are attached to my report as Appendix A.

2. My time is being billed at the rate of $950 per hour for my work in this matter. This is my normal hourly rate for this type of work. Payment to me is not contingent on my opinions in this matter. I reserve the right to supplement this report if and when additional, relevant material becomes known to me.

B. Assignment

3. I have been retained by counsel for a proposed class of coaches of sports other than baseball, basketball, and FBS football at National Collegiate Athletic Association ("NCAA") Division I schools. The members of the class were all designated by NCAA Division I schools as "volunteer coaches," a designation that, under NCAA bylaws, meant that schools could not provide them with any compensation. The plaintiffs allege the NCAA and its member schools have engaged in an illegal wage-fixing conspiracy to suppress the wages of thousands of NCAA Division I coaches to zero dollars.[1]

4. The plaintiffs' counsel have asked me to give my opinion on the two questions relevant for class certification.

- Whether common evidence exists that all or nearly all members of the proposed class have been harmed as a result of the alleged conspiracy.
- Whether one or more accepted and feasible methods exist for estimating monetary damages incurred by the proposed class members as a result, over the period of March 17, 2019 through June 30, 2023, when the NCAA bylaw was abandoned, on a class-wide basis and whether sufficient data are available to implement these methods.

C. Summary of Opinions

5. In forming my conclusions, described at length in this report, I have reviewed extensive documentary and empirical evidence in this matter. To the extent that new evidence

[1] *Colon v. NCAA, No.* 1:23-cv-00425-WBS-KJ Second Amended Class Action Complaint ("Second Amended Class Complaint").

becomes available (including, but not limited to, testimonial evidence) I reserve the right to update and supplement my opinions.

6. Compensation (or lack thereof) of "volunteer" coaches as well as the number of "volunteer" coaches a team could have was governed by NCAA's Division I bylaws Article 11, in particular 11.01.6, 11.7.6 and 11.7.6.2.3, and Figure 11-1. All Division I schools are subject to the bylaws established by NCAA, and as a result all "volunteer" coaches used by schools' sports teams were all subject to the same regulations.[2] These coaches could not be compensated by the schools.[3]. In contrast, the NCAA Division I bylaws do not include any restriction on the amounts that schools may pay their other coaches. Throughout this report, I refer to coaches whose pay was not restricted by these bylaws as "unrestricted" coaches. I refer to the coaches subject to the wage restriction as "volunteer coaches" because that is how the NCAA bylaws refer to them. I refer to the bylaws preventing payment to volunteer coaches as the "Volunteer Coach Rule."

7. I make use of the change in the NCAA Division I bylaws in 2023, which eliminated the Volunteer Coach Rule and expanded the number of unrestricted coaching slots for each sport, to estimate the relationship between the lowest-paid coach and the pay of other coaches in each program. I then use this relationship to estimate how much the class members would have earned in the absence of the Volunteer Coach Rule, based on the compensation of unrestricted coaches for each program during the class period . I also describe how it is possible to use this relationship to estimate the "but-for" earnings of the members.

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[2] NCAA_SMART-COLON_0000001 at Constitution Articles 3.2.1.2, 3.3.4.1; Bylaw 19.01.2.

[3] *See* NCAA_SMART-COLON_0000001 at Bylaw 11.01.06 ("In sports other than bowl subdivision football and basketball, a volunteer coach is any coach who does not receive compensation or remuneration from the institution's athletics department or any organization funded in whole or in part by the athletics department or that is involved primarily in the promotion of the institution's athletics program (e.g., booster club, athletics foundation association), and Figure 11-1 ("compensation or remuneration from Athletics Department prohibited").

8. I conclude based on this analysis that there exists evidence common to the class that the alleged conspiracy suppressed class members' compensation generally, namely at zero. I also find that the alleged conspiracy affected all or nearly all members of the class.

9. I also conclude that the NCAA Division I member schools had sufficient market power to suppress the compensation of the coaches that were subject to the Volunteer Coach Rule. I base this on my conclusion that the compensation of class members was suppressed below the competitive level, namely to $0.

10. I also conclude that there exists a reasonable methodology by which to estimate damages using data and methods that are common to the class.

II. Case and Background

A. Plaintiffs

11. Shannon Ray coached track and field at Arizona State University in Tempe, Arizona from 2019 to 2020, and was designated as a "volunteer coach."[4]

12. Khala Taylor coached softball at San Jose State University in San Jose, California from 2022 to 2023, and was designated as a "volunteer coach."[5]

13. Peter Robinson coached swimming and diving at the University of Virginia in Charlottesville, Virginia from 2019 to 2021, and was designated as a "volunteer coach."[6]

14. Katherine Sebbane coached softball at the University of Pittsburgh in Pittsburgh, Pennsylvania from 2019 to 2021, and was designated as a "volunteer coach."[7]

[4] Second Amended Complaint at ¶ 7.

[5] Second Amended Complaint at ¶ 8.

[6] Second Amended Complaint at ¶ 9.

[7] Second Amended Complaint at ¶ 10.

15. Rudy Barajas coached women's volleyball at Fresno State University from 2018 to 2023, and was designated as a "volunteer coach."[8]

B. Defendant

16. The NCAA is headquartered in Indianapolis, Indiana.[9] The NCAA governs student athletic competition at approximately 1,100 colleges and universities in the United States and Canada. [10] Colleges and universities are divided into three largely autonomously governed divisions, Division I, Division II, and Division III.[11] The proposed class in this case consists of coaches in NCAA Division I sports programs other than baseball, basketball, and FBS football.[12] The NCAA describes Division I schools as "generally hav[ing] the biggest student bodies, manag[ing] the largest athletics budgets, and offer[ing] the highest number of athletics scholarships."[13] There are 353 NCAA Division I schools, which collectively field over 4300 Division I sports programs.[14]

17. NCAA Division I athletics are big business. Table 1 presents the total athletics revenue for all NCAA Division I institutions, as well as the average athletics revenue per NCAA Division I institution. In 2022-23, the most recent year for which the NCAA Membership Financial Reporting System ("MFRS") database has been published, the average Division I

[8] Second Amended Complaint at ¶ 11.

[9] Overview, NCAA https://www.ncaa.org/sports/2021/2/16/overview.aspx.

[10] Overview, NCAA https://www.ncaa.org/sports/2021/2/16/overview.aspx.

[11] See NCAA_SMART-COLON_0001396 at _0001412; *see also* Overview, NCAA, https://www.ncaa.org/sports/2021/2/16/overview.aspx.

[12] Baseball volunteer coaches are the proposed class in the case *Smart v. NCAA*, No. 2:22-cv-02125 (E.D. Cal.). Basketball and FBS football did not have restrictions on how much they could pay their coaches.

[13] Overview, https://www.ncaa.org/sports/2021/2/16/overview.aspx.

[14] *See* my workpapers. There are a total of 398 schools that sponsor at least one Division I athletics program. These schools collectively field over 4500 programs.

institution earned over $54 million in athletics revenue. Across all NCAA Division I institutions, athletics revenue totaled over $19 billion.

Table 1: Total Athletics Revenue for NCAA Division I Institutions

Year	Total athletics revenues for all NCAA DI Institutions	Average athletics revenue per NCAA DI Institution
2015-2016	$ 13,506,412,772	$ 39,035,875
2016-2017	$ 14,397,168,770	$ 41,610,314
2017-2018	$ 15,239,103,776	$ 43,416,250
2018-2019	$ 15,805,254,035	$ 45,029,214
2019-2020	$ 15,700,612,737	$ 44,731,090
2020-2021	$ 13,320,789,180	$ 38,059,398
2021-2022	$ 17,457,866,212	$ 49,879,618
2022-2023	$ 19,040,414,454	$ 54,246,195

Source: NCAA MFRS Data

18. NCAA Division I schools tend to be large: an analysis performed by the NCAA reports that the mean undergraduate enrollment of an NCAA Division I school is nearly 12,000 students, and only 10% of NCAA Division I schools are "small" schools with undergraduate enrollment of 2,999 or fewer students.[15] Furthermore, a majority (63%) of NCAA Division I schools are classified as "Research Universities," defined as schools that grant at least 20 doctoral degrees per year.[16] Two-thirds (67%) of NCAA Division I schools are public institutions.[17]

[15] "Institutional Characteristics of NCAA Member Schools" at p. 2. https://ncaaorg.s3.amazonaws.com/research/demographics/2017RES_institutionalcharacteristics.pdf

[16] "Institutional Characteristics of NCAA Member Schools" at p. 2. https://ncaaorg.s3.amazonaws.com/research/demographics/2017RES_institutionalcharacteristics.pdf

[17] "Institutional Characteristics of NCAA Member Schools" at p. 5. https://ncaaorg.s3.amazonaws.com/research/demographics/2017RES_institutionalcharacteristics.pdf

19. Coach compensation is the largest expense item for NCAA Division I schools, and the second-largest expense item (behind student athletics aid) at non-FBS Division I schools.[18] Table 2 presents total annual spending on coaching staff by all Division I schools for each year since 2015-2016. In the 2022-2023 academic year, NCAA Division I schools spent over $3.5 billion on salaries and benefits for their coaching staffs.

Table 2: Total Coaching Expenses for NCAA Division I Institutions

Year	Total coaching staff expenses for all NCAA DI Institutions
2015-2016	$ 2,403,336,066
2016-2017	$ 2,537,693,682
2017-2018	$ 2,730,333,903
2018-2019	$ 2,916,193,677
2019-2020	$ 3,009,201,781
2020-2021	$ 2,987,070,366
2021-2022	$ 3,290,836,811
2022-2023	$ 3,563,960,182

Source: NCAA MFRS Data. Coaching staff expenses include salary, bonuses, and benefits, including allowances, speaking fees, retirement, stipends, memberships, media income, tuition reimbursement/exemptions (for self or a dependent) and earned deferred compensation, including those funded by the state.

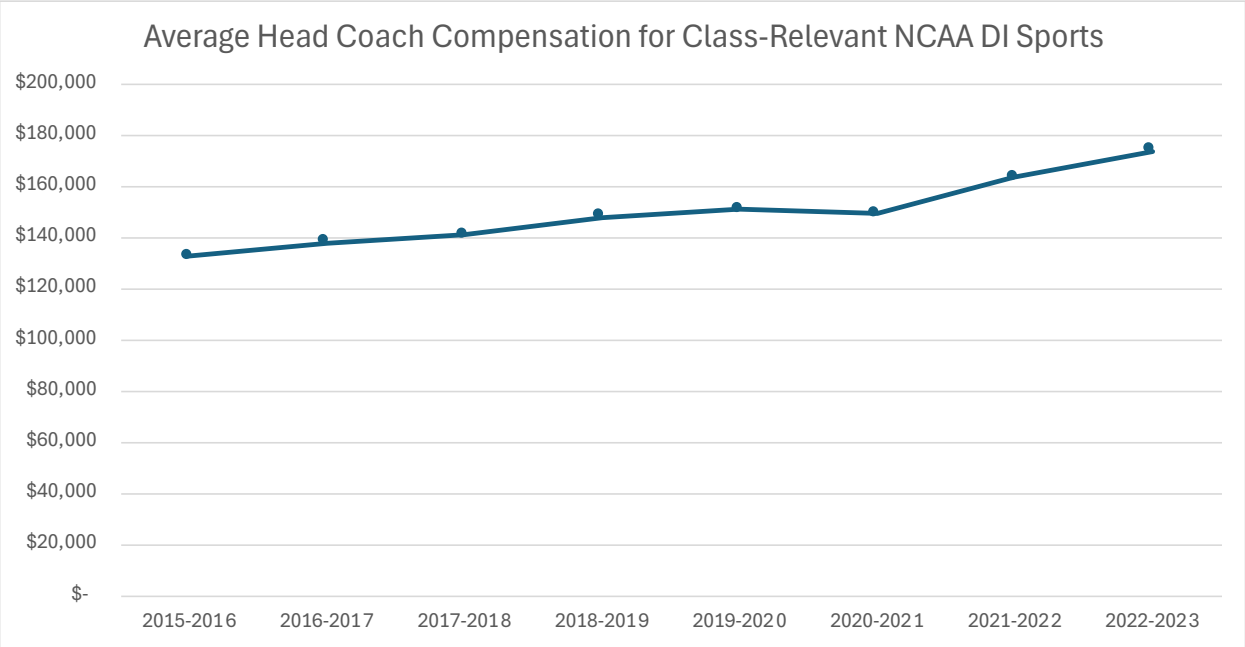
20. NCAA Coaches can be quite well paid, and their pay is increasing over time. Figure 1 presents the average compensation for head coaches in class-relevant Division I sports since 2015-2016.[19] Other than a small dip during 2020-2021 (the first year of the Covid-19 pandemic, which interrupted many athletic seasons), the average compensation of head coaches

[18] National Collegiate Athletic Association. (2023). *NCAA Financial Database* [Data visualization dashboard]. Retrieved from https://www.ncaa.org/sports/2019/11/12/finances-of-intercollegiate-athletics-database.aspx at "Intercollegiate Athletics Expense Items."

[19] "Class-relevant" Division I sports are all Division I sports excluding FBS football, basketball, and baseball.

increased each year during this period. In the 2022-2023 academic year, the average pay of an NCAA Division I head coach was more than $170,000 per year. The average head coach compensation during academic years 2019-2020 through 2022-2023 is approximately $159,000.[20]

Figure 1: Head Coach Compensation



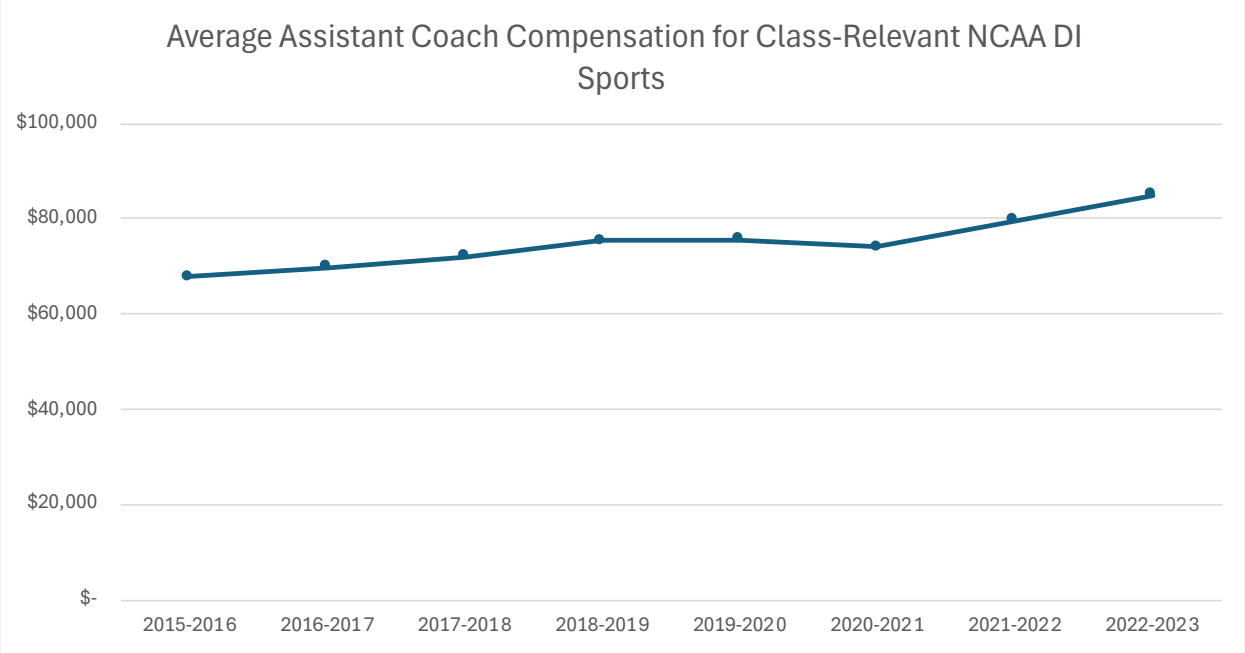
Source: NCAA MFRS Data. Excludes FBS Football, Basketball, and Baseball

21. Figure 2 presents the average pay for assistant coaches (that is, non-head coaches) not subject to the restraint at issue in this case for all Division I sports since 2015-2016. As with head coaches, with the exception of a small decrease in pay during the first year of the Covid-19 pandemic, the pay of unrestricted assistant coaches increased each year during this period. In the 2022-2023 academic year, the average pay of an NCAA Division I unrestricted assistant coach

[20] This compensation includes salary, bonuses, and benefits, including allowances, speaking fees, retirement, stipends, memberships, media income, tuition reimbursement/exemptions (for self or a dependent) and earned deferred compensation, including those funded by the state.

was more than $85,000. The average assistant coach compensation during academic years 2019-2020 through 2022-2023 is approximately $78,000.

Figure 2: Unrestricted Assistant Coach Compensation



Source: NCAA MFRS Data Excludes FBS Football, Basketball, and Baseball

22. Table 3 presents, for each of the sports at issue in this case, the average compensation during the 2022-23 academic year for those assistant coaches whose compensation was not restricted by the rule at issue in this case.

Table 3: Average Compensation by Sport for NCAA Division I Institutions (2022-23)

Sport Name	Average Compensation
M. Fencing	$ 73,098.41
M. Football (FCS)	$ 96,451.20
M. Golf	$ 75,679.52
M. Gymnastics	$ 98,261.95
M. Ice Hockey	$ 169,502.97
M. Lacrosse	$ 104,237.09
M. Rifle	$ 52,472.21
M. Skiing	$ 69,666.63
M. Soccer	$ 76,479.70
M. Swimming & Diving	$ 79,401.69
M. Tennis	$ 77,093.12
M. Track (Indoor & Outdoor) & Cross Country	$ 79,597.39
M. Volleyball	$ 88,632.40
M. Water Polo	$ 85,275.96
M. Wrestling	$ 107,930.19
W. Acrobatics and Tumbling	$ 50,940.47
W. Beach Volleyball	$ 62,692.44
W. Bowling	$ 47,531.00
W. Equestrian	$ 91,424.29
W. Fencing	$ 71,106.66
W. Field Hockey	$ 74,190.25
W. Golf	$ 72,870.04
W. Gymnastics	$ 119,139.30
W. Ice Hockey	$ 103,755.93
W. Lacrosse	$ 78,655.41
W. Rifle	$ 60,174.05
W. Rowing	$ 73,615.07
W. Rugby	$ 61,594.05
W. Skiing	$ 70,021.13
W. Soccer	$ 77,583.55
W. Softball	$ 85,607.23
W. Stunt	$ 78,747.50
W. Swimming & Diving	$ 77,172.76
W. Tennis	$ 72,474.20
W. Track (Indoor & Outdoor) & Cross Country	$ 78,363.32
W. Triathlon	$ 51,221.99
W. Volleyball	$ 85,171.73
W. Water Polo	$ 77,344.87
W. Wrestling	$ 66,934.22
Total	$ 85,043.09

Source: NCAA MFRS data, 2022-2023

23. During each year presented in the above charts, class members, i.e. coaches designated by their schools as "Volunteer Coaches," received $0 compensation for their work as coaches for NCAA Division I teams as required by the NCAA Bylaws cited above.

C. The NCAA's Coaching Caps and the "Volunteer Coach" Rule

24. In the late 1980s, the NCAA established a "Cost Reduction Committee" aimed at reducing the cost of intercollegiate sports. The Cost Reduction Committee's final report, issued in 1990, recommended "a number of changes designed to reduce costs," the first of which was to establish a limit on the number of coaches associated with each sport, and to "establish a 'restricted earnings' category that will encourage the development of new coaches while more effectively limiting compensation to such coaches."[21] These rules (establishing limits on the number of coaches, and limiting the payment of the lowest-earning coach for each sport) were voted on at the 1991 NCAA Convention, and went into effect in the 1992-1993 season. The following year, at the 1992 NCAA Convention, in response to the coaching caps, many NCAA member institutions "expressed concern that a group of unpaid volunteers…would be precluded from coaching and providing assistance to student-athletes. This proposal would permit each sport other than football and basketball the use of one volunteer coach….[t]he establishment of a volunteer coach also would not result in any significant additional costs to the institution."[22]

25. The NCAA faced antitrust lawsuits in the late 1990s related to "restricted earnings" coaches.[23] In those cases, individuals designated as "restricted earnings" coaches could earn no more than $12,000 during the academic year and $4,000 during the summer. There were

[21] NCAA_SMART-COLON_0141887 at 93-94.

[22] NCAA_SMART-COLON_0143283 at -510.

[23] *Law v. NCAA*, 134 F. 3d 1010 (10th Cir. 1998). This case was coordinated with *Schreiber v. NCAA* and *Hall v. NCAA*.

three classes certified by the Court: one for men's basketball, one for baseball, and one for all other sports. The court granted summary judgment on liability to the Plaintiffs, which was upheld on appeal. The case went to trial and the three classes were awarded damages.[24]

26. Until its policy change in January 2023, which went into effect July 2023, the NCAA allowed for certain classes of coaches in most sports: among them, head coaches, assistant coaches as to whom there were no restrictions on "compensation or remuneration," and assistant coaches designated as "volunteer coaches" for whom no "compensation or remuneration" was permitted.[25] Within each category a certain number of such coaches are permitted. NCAA Rules define a "coach" as any person who "is designated by the institution's athletics department to perform[s] coaching duties and who serves in that capacity on a volunteer or paid basis".[26] Any staff member who meets the definition of "coaching" must be "counted" against those limits. Bylaw 11.7.1.1 states that "[a]n institutional staff member or any other individual outside the institution (e.g. consultant, professional instructor) with whom the institution has made arrangements must count against coaching limits in the applicable sport as soon as the individual participates (in any manner) in any of the following:

- Provides technical or tactical instruction related to the sport to a student-athlete at any time; or
- Makes or assists in making tactical decisions related to the sport during on-court or on-field practice or competition; or

[24] *Law v. NCAA*, 185 F.R.D. 324 (D. Kan. 1999).

[25] In addition to unrestricted coaches and coaches subject to the Volunteer Coach Rule, there was also an allowed category of "graduate assistant coaches" and "student assistant" coaches (NCAA_SMART-COLON_0000001 at Bylaw 11.01.3, 11.01.4, and 11.01.5). It is my understanding that the "graduate assistant" and "student assistant" coaches are not at issue in this case.

[26] NCAA_SMART-COLON_0000001 at Bylaw 11.01.2.

- Engages in any off-campus recruiting activities."[27]

27. The NCAA limits the number of coaches in each coaching category for each sport. Prior to the NCAA's rule change in 2023, most sports had limits of two or three coaches (e.g. a head coach and one or two assistant coaches) who had no restrictions on "compensation or remuneration."[28,29] A small number of sports allowed for more unrestricted coaches (e.g. women's rowing, which allowed four unrestricted coaches, or championship subdivision football, which allowed eleven unrestricted coaches).[30] In the event that a school offers a combined men's and women's program, the unrestricted coach cap is the sum of the individual teams' coaching caps.[31] For instance, a men's swimming and diving team may have three unrestricted coaches; a women's swimming and diving team may have three unrestricted coaches; a combined men and women's swimming and diving team may have six unrestricted coaches.[32]

28. In addition to unrestricted coaches, the NCAA also allowed, prior to the rule change in 2023, one or more "volunteer" coaches for sports other than bowl subdivision football

[27] NCAA Bylaws at 11.7.1.1.

[28] See NCAA Manual Figure 11-1.

[29] The numbers of such unrestricted coaches, among other things, are set out for the respective sports in Bylaw 11.7.6.

[30] NCAA Bylaw 11.7.6. 2020-21 NCAA Division I Manual Division I football programs are divided into two categories: Bowl Subdivision (FBS) and Championship Subdivision (FCS). FBS schools can compete in bowl games. FBS teams did not have restrictions on pay to coaches. Additionally, both women's and men's basketball allow for four coaches without restrictions on pay. Other than FBS football and basketball, all other Division I sports were allocated at least one coaching position that was subject to the restrictions on compensation at issue in this case.

[31] NCAA_SMART-COLON_0000001 at Bylaw 11.7.6.1.

[32] NCAA_SMART-COLON_0000001 at Bylaw 11.01.2.

("FBS football") and basketball.[33] The NCAA defines "volunteer coach" as "any coach who does not receive compensation or remuneration from the institution's athletics department or any organization funded in whole or in part by the athletics department or that is involved primarily in the promotion of the institution's athletics program (e.g., booster club, athletics foundation association)."[34] The only restriction on coaching duties for a coach designated as the "volunteer coach" that does not apply to unrestricted coaches is that volunteer coaches are prohibited from "contacting and evaluating prospective student-athletes off campus and may not perform recruiting coordination functions."[35] Coaches designated as the "volunteer coach" may not receive any compensation from the university including salaries, wages, tuition waivers or reimbursement, and health or other forms of insurance.[36] Volunteer coaches may receive tickets to home games in their sport, or in conjunction with a prospective student athlete's visit, and may receive occasional meals and entertainment as part of team activities.[37]

[33] NCAA_SMART-COLON_0000001 at Bylaw 11.7.6.2.3. Most sports were permitted to fill one "volunteer coach" slot. Exceptions to this were: women's rowing (four volunteer coaches); swimming and diving (three volunteer coaches for combined male and female programs, or two volunteer coaches for single-gender programs); cross country and track and field (up to three volunteer coaches, one each for indoor track and field; outdoor track and field; and cross country; additionally, if the track and field program competes in pole vault, the institution may add a pole-vault specific volunteer coach); women's equestrian (two volunteer coaches, one each for hunt seat riding and western riding); women's triathlon (three volunteer coaches, one for each element of swimming/bicycling/running); women's acrobatics and tumbling (two volunteer coaches, as of August 1, 2020); FCS football (two volunteer coaches).

[34] NCAA_SMART-COLON_0000001 at NCAA Bylaw 11.01.6.

[35]NCAA_SMART-COLON_0000001 at NCAA Bylaw 11.01.6(a).

[36] NCAA_SMART-COLON_0000001 at NCAA Bylaw 11.01.6 and Figure 11-1 "Coaches' Compensation and Benefits".

[37] NCAA_SMART-COLON_0000001 at NCAA Bylaw 11.01.6.

29. In 2023, the NCAA's member schools voted to eliminate the volunteer coach designation.[38] They also increased the number of allowed unrestricted coaches, typically by the number of "volunteer coaches" allowed under the prior rules.[39] For instance, lacrosse teams were allowed three unrestricted coaches and one "volunteer coach" under the prior rules, and four unrestricted coaches under the rules adopted in 2023. Likewise, women's acrobatics and tumbling was allowed three unrestricted coaches and two volunteer coaches in 2020-21, and five unrestricted coaches under the rules adopted in 2023.[40] Thus under the rule change in 2023, the number of allowed coaching positions was, by and large, unchanged, but the restriction on paying one or more of the allowed coach positions was eliminated.

30. The Plaintiffs in this case have alleged that the NCAA's bylaws creating the volunteer coach position and then forbidding "compensation or remuneration"[41] to volunteer coaches "make[s] the member schools a buyer-side cartel: a group of competitors agreeing to abide by naked horizontal pricing restraints to purposefully restrict competition in the labor market for valuable college coaching services so they can collectively reduce their costs. The very purpose and effect of this horizontal agreement was to fix and suppress salaries so as to

[38] In the 2020-21 NCAA Division I Manual (NCAA_SMART-COLON_0000001), volunteer coaches were defined in Section 11.7.6.2.3 "Volunteer Coach", which falls under Section 11.7.6.2 "Exceptions to Number Limits." In the 2023-24 NCAA Division I Manual (NCAA_SMART-COLON_0001396), there is no longer a Volunteer Coach exception (see NCAA_SMART-COLON_0001396at 11.7.5.2 "Exceptions to Number Limits").

[39] Compare Bylaw 11.7.5 in the 2020-21 NCAA Division I Manual (NCAA_SMART-COLON_0000001) with Bylaw 11.7.5 in the 2023-24 NCAA Division I Manual (NCAA_SMART-COLON_0001396).

[40] There are exceptions to this: basketball allowed four unrestricted coaches and had zero coaches subject to the Volunteer Coach Rule under the earlier rules. It now allows six coaches (though only four may participate in off-campus recruiting) under the rules adopted in 2023. Likewise, women's triathlon allowed for two unrestricted coaches and three coaches subject to the Volunteer Coach Rule under the earlier rules, and allows for three coaches under the rules adopted in 2023.

[41] See NCAA_SMART-COLON_0000001 at Figure 11-1.

make them unresponsive to a competitive marketplace or even one in which basic wage-and-hour laws are respected."[42]

D. Class Definition

31. The proposed class is "[a]ll persons who, from March 17, 2019 to June 30, 2023, worked for an NCAA Division I sports program other than baseball in the position of 'volunteer coach,' as designated by NCAA Bylaws."[43]

III. The NCAA and its Member Schools Exercised Monopsony Power

A. The Economics of a wage-fixing conspiracy

32. In order to successfully collude, cartels need to solve three challenges. As summarized by Levenstein and Suslow (2006), these are: "first, selecting and coordinating the behavior of all cartel participants on mutually consistent, collusive strategies; second, monitoring the behavior of cartel participants to detect and deter defections from these collusive strategies; and third, preventing entry (or expansion) by noncartel firms."[44] The NCAA and its member schools achieved these three goals.

1. Selecting and coordinating the behavior of all cartel participants

33. The NCAA and its Division I member schools, upon adoption of the Volunteer Coach Rule, selected and coordinated the behavior of all Division I schools: to fix the compensation of a class of coaches at $0. While typically such coordination is performed in secret and typically not formalized in contracts, bylaws, or other writings, in this case the

[42] Second Amended Complaint at ¶ 4.

[43] Second Amended Complaint at ¶ 19.

[44] Levenstein, Margaret C., and Valerie Y. Suslow. "Cartel Bargaining and Monitoring: The Role of Information Sharing." The Pros and Cons of Information Sharing, 2006.

coordination was performed in public and memorialized in the NCAA Bylaws.[45] This was also true in several other antitrust cases in which the NCAA was the defendant.[46] Such collusive agreements were similarly formalized in the "franchise no-poach" agreements that were common in the United States prior to enforcement actions by the Washington State Attorney General.[47]

2. Monitoring cartel participants and deterring defections

34. The NCAA monitors its member schools for compliance. The bylaws state that "[e]ach institution shall comply with all applicable rules and regulations of the Association in the conduct of its intercollegiate athletics programs. It shall monitor its programs to ensure compliance and to identify and report to the Association instances in which compliance has not been achieved."[48] In addition to self-monitoring, the NCAA required schools to report data on the number of and compensation to coaches, including information about volunteer coaches, to the NCAA's Membership Financial Reporting System (MFRS).[49]

35. The NCAA punishes schools for noncompliance with bylaws. The bylaws state that "[a]n institution found to have violated the Association's rules shall be subject to such disciplinary and corrective actions as may be determined by the Association."[50] These punishments include possible fines, vacation of records and scholarship reductions, and recruiting restrictions, among other potential penalties.[51] The NCAA bylaws describe "[t]he

[45] E.g. NCAA Bylaw 11.01.6, NCAA_SMART-COLON_0000001.

[46] These include *House v. NCAA*, No. 20-cv-03919 (N.D. Cal.), *Alston v. NCAA*, No. 14-md-02541 (N.D. Cal.), and *Law v. NCAA*, Nos. 94-cv-2053, 94-cv-2392, and 95-cv-2026 (D. Kan.)

[47] https://www.atg.wa.gov/news/news-releases/ag-report-ferguson-s-initiative-ends-no-poach-practices-nationally-237-corporate

[48] NCAA_SMART-COLON_0000001 at Bylaw 2.8.1.

[49] I discuss the MFRS in more detail in Section V.B below.

[50]NCAA_SMART-COLON_0000001 at Bylaw 2.8.3.

[51] https://www.ncaa.org/sports/2013/11/27/enforcement-process-penalties.aspx at F.A.Q.

ability to investigate allegations and penalize infractions" as "critical to the common interests of the Association's membership and the preservation of its enduring values."[52]

36. I have reviewed documents summarizing punishments from the NCAA for violating the Volunteer Coach rule. These violations and punishments include:

- A volunteer gymnastics coach at the University of Nebraska - Lincoln received "impermissible" payments related to floor exercise choreography and music. The NCAA described the violation as "exceed[ing] the permissible number of countable [unrestricted] coaches when the former head coach and members of the program arranged for a former volunteer coach to receive impermissible compensation." The program received a two year penalty and was fined $5,000 plus 1% of the women's gymnastics budget. Both the head coach and volunteer coach were also punished with "show cause" orders which restricted their abilities to be employed by any NCAA member school for a period of several years.[53] The head coach resigned and eventually retired as a result of the University's investigation; the volunteer coach was "permanently disassociated" with the University as a result of the same.[54]
- The women's volleyball program at Missouri State University was punished for, among other violations, providing monthly payments and free housing to "coaches who were intended to be volunteers." These monthly payments ranged from $100 per month to $500 per month.[55] The women's volleyball team was found to have

[52] NCAA_SMART-COLON_0000001 at Bylaw 19.01.1.

[53] NCAA_SMART-COLON_0019078.

[54] NCAA_SMART-COLON_0019352 at -62.

[55] NCAA_SMART-COLON_0019450 at -58.

committed multiple Level I (severe breaches) and Level II (significant breaches) violations for this and other conduct.[56] Among the violations found by the NCAA, Missouri State University was found to have failed to adequately monitor the women's volleyball program for compliance with the NCAA's Division I bylaws.[57]

- There are several instances where volunteer coaches received free admission to events, either more tickets than allowed (e.g. three tickets to a home game when only allowed two under the Volunteer Coach Rule), or tickets that the volunteer coach was not eligible to receive (e.g. admission to a conference championship). In these cases, the NCAA often recommended that the institution should require the volunteer coach to make a "donation to the charity of her choice in the amount of the impermissible complementary admission."[58]
- The NCAA has punished schools for reimbursing volunteer coaches for expenses incurred to attend coaching conventions.[59]

[56] NCAA_SMART-COLON_0019450 at -72.

[57] NCAA_SMART-COLON_0019450 at -68.

[58] NCAA_SMART-COLON_0020637 (a women's volleyball coach who received three tickets to a home volleyball match); NCAA_SMART-COLON_0020323 (two volunteer track and field coaches received complementary admission to the conference championship); NCAA_SMART-COLON_0027251 (A men's volleyball coach two complementary admissions to an away-from-home contest); NCAA_SMART-COLON_0027589 (a women's softball coach received two complementary tickets to an away game).

[59] NCAA_SMART-COLON_0020925 (a softball coach was provided $1,255.10 in convention, travel, and hotel expenses to attend a convention; upon discovery of the violation, the volunteer coach repaid this money to the athletic department and two assistant coaches in her program); NCAA_SMART-COLON_0020631 (a men's wrestling team paid for the volunteer coach's flights and meals when attending a coaching convention. The NCAA recommended that the institution should require the volunteer coach to make a repayment of these impermissible expenses to charity).

- The NCAA has punished schools for providing food to volunteer coaches.[60]
- The NCAA has punished schools for allowing a volunteer coach to receive compensation for a role other than volunteer coach.[61]
- During the COVID-19 pandemic, two volunteer lacrosse coaches were selected as recipients of $1000 donations from a GoFundMe account started by Inside Lacrosse to help raise money for assistant lacrosse coaches who were negatively impacted by the pandemic. The NCAA recommended the institution should be required to have the volunteer coaches donate this money to charity.[62]

3. Preventing entry or expansion by non-cartel firms

37. In order for their students to play collegiate sports at the highest level, colleges must, by definition, be members of Division I of the NCAA. The NCAA offers two less-competitive Divisions (Divisions II and III). In order to compete in NCAA Division I sports, all schools must agree to the Division I bylaws, which until their change in 2023, included the restrictions at issue in this case, which prevented compensating coaches designated as "volunteer coaches." Therefore, to the extent that any colleges joined NCAA Division I, or extant Division I schools introduced new athletic teams, these programs would be bound by the alleged conspiracy at issue in this case.

38. By setting the maximum compensation for a class of workers it deemed "volunteer coaches" at $0, the NCAA and its members agreed on compensation limits for thousands of

[60] NCAA_SMART-COLON_0027843 (a women's volleyball coach was provided a meal from the campus dining hall during an unofficial prospective student athlete's visit.)

[61] NCAA_SMART-COLON_0028382 (a men's wrestling volunteer coach received compensation in his capacity as a graduate assistant for the convocation center, which is operated by the athletics department. The NCAA recommended that the volunteer coach be suspended.)

[62] NCAA_SMART-COLON_0023825.

coaches, and the NCAA then enforced these limits on its member schools. Schools were required to report to the NCAA the number of coaches employed for each sport, and the NCAA monitored for compliance. By forbidding schools from providing any salary, tuition assistance, health insurance, or other benefits, this harmed workers and decreased staffing costs to NCAA member schools.

B. Direct Evidence of Monopsony Power in the Market for NCAA Division I Assistant Coaches

39. Monopsony power is the power to profitably suppress the price of an input below competitive levels. Monopsony power in a labor market is the power to profitably suppress compensation, working conditions, or benefits below the competitive level. [63] The labor market at issue in this case is the market for NCAA Division I assistant coaches in the United States. The exercise of defining an antitrust market is designed to infer monopsony power from market shares where direct evidence is not available. As I describe below, there is direct evidence of monopsony power in the market for NCAA Division I assistant coaches in the United States. As such, there is no need to engage in the traditional practice of measuring market share to infer the existence of market power.[64] Additionally, I note that though the caps on the number of coaches

[63] Carlton, Dennis W, and Jeffrey M Perloff. *Modern Industrial Organization*. 2nd ed., 1994, p. 153.

[64] *See, e.g.,* Baker, Jonathan B. and Timothy F. Bresnahan. *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power.* Handbook of Antitrust Economics ed., 2007, p. 15 ("Historically, in the antitrust world, market power has most commonly been identified through inference from a high market share. But direct evidence has increasingly become important as an alternative, in part because academic economists have developed a number of econometric approaches for measuring market power."). Baker and Bresnahan also note that "quantitative methods of measuring market power through direct evidence have parallels involving the use of qualitative evidence." Baker and Bresnahan (15). *See also* Edlin, Aaron S. and Daniel L. Rubinfeld, "Exclusive or Efficient Pricing? The Big Deal Bundling of Academic Journals." Antitrust Law Journal, vol. 72, no. 1, 2004, pp. 119, 126. ("Market definition is only a traditional means to the end of determining whether power over price exists. Power over price is what matters…if power can be shown directly, there is no need for market definition: the value of market

are not at issue in this case, a mechanism by which monopsonists lower wages is by reducing hiring.[65] The NCAA's coach caps, which limit the number of coaches each team is allowed, serve to restrict compensation of coaches and are evidence of the NCAA and its member schools exerting market power.

40. In Section VI below, I use regression analysis to estimate the relationship between the pay of unrestricted coaches and the but-for pay of the coaches subject to the restraint at issue in this case using pay structures in the post-conspiracy period as a competitive benchmark.[66] Furthermore, it is worth reiterating that under the restraint at issue here, class members earned $0 in compensation for their labor. Absent a hypothetical scenario where a firm charges employees a fee to work, the restraint at issue in this case suppressed compensation to the lowest possible value, $0.

41. Based on my review of the evidence and the analysis described below, I conclude that the NCAA and its member schools have sufficient monopsony power over NCAA Division I assistant coaches to suppress compensation for the class members. A cartel's successful exercise of monopsony power is direct evidence that the cartel had monopsony power. Here, I find that competitive compensation for Division I coaching services is greater than $0 and was greater than $0 at all times during the class period. However, because of the Volunteer Coach Rule, class

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definition is in cases where power cannot be shown directly and must be inferred from sufficiently high market share in a relevant market."). *See also* Areeda, Phillip E., et al. *Antitrust Law: An Analysis of Antitrust Principles and Their Application*. 1996. 2003. pp. 267, 325–28, ¶ 1758b.; *see also* Areeda, Phillip, et al. *Antitrust Analysis: Problems, Text and Cases.* 6th ed., 2004, ¶ 344.

[65] Posner, Eric A. How Antitrust Failed Workers. Oxford University Press. 2021 at p. 31.

[66] As I describe at further length below, the "post conspiracy" period for which I have data likely does not reflect truly competitive market dynamics. Nevertheless, the programs which have expanded their roster of paid coaches provide a reasonable benchmark for the but-for compensation of class members in the absence of the restraint on competition at issue in this case.

members were paid $0 for their labor. That the NCAA and its member schools, through the Volunteer Coach Rule, successfully suppressed compensation for volunteer coaches in all sports and at all schools below the competitive level is direct evidence that they had sufficient monopsony power to do so.

C. Effect of Ending Volunteer Coach Rule Will Not Be Immediate

42. Once the restraint on compensation was abandoned and all limits on compensation for coaches were removed, one might expect that a sport's team would immediately start paying the team's previous volunteer coach. However, I would not expect this to happen immediately at every school, for several reasons: first, wages in general do not typically adjust immediately; second, university budgets are typically set in advance and many programs may not have had time to adjust budgets for increased paid coaching positions; third, sport programs have anchored their expectations that they are able to pay some workers a suppressed rate—$0—due to the decades-long history of the Volunteer Coach Rule.

1. Wages do not adjust immediately

43. It is a well-known phenomenon in economics that wages do not immediately adjust to market changes.[67] Wages generally exhibit "rigidity" and take some time to adjust to changes in the market, such as an increase in demand for paid coaches triggered by renewed competition among the NCAA's member schools for labor.

44. I would not expect schools to react to the removal of the compensation restrictions by reducing compensation for incumbent unrestricted coaches and using that funding to pay a former volunteer coach or hire someone else. Labor economists have noted that, unlike product

[67] For a discussion of why wages do not react instantaneously to changes in market conditions, *see, for example*, Armen Alchian, "Information Costs, Pricing, and Resource Unemployment." Western Economic Journal. (1969) pp. 109-128.

markets, labor markets are often characterized by strong norms about wage setting, including the fact that employers can always raise nominal wages, but cannot easily lower them because employees tend to anchor on their current compensation and as a result morale will be deeply affected by nominal wage reductions, to the point that they are almost never implemented regardless of changes in supply and demand conditions. This phenomenon is called downward nominal wage rigidity.[68] Because of downward nominal wage rigidity, I would not expect to see schools reduce compensation of incumbent coaches in order to "free up" budget to pay for a newly created coaching position if that position was not already budgeted. It is possible that schools will increase the pay of incumbent coaches by less than they would have if the NCAA's compensation restrictions remained in place in order to allocate that spending to the newly expanded unrestricted earnings positions, but this adjustment will take some time to provide sufficient funding for one or more new unrestricted positions. Additionally, it is possible that schools may reduce pay for a coaching position when there is eventual turnover.

2. Adjusting university budgets takes time

45. The budgeting process is slow, with university budgets being set well in advance of the beginning of each new fiscal year. I have seen evidence that, as of the eve of the end of the Volunteer Coach Rule, athletics department officials express that their budgets were yet unchanged. In an email chain among athletics directors at various universities, one wrote, "[w]e've been working with our general counsel, and true volunteer positions are no longer going to be approved at our University due to employment regulations. So basically, we are allowing programs to transition their volunteers to a paid, casual wage countable coach if they

[68] Lebow, David E., et al. "*Downward Nominal Wage Rigidity: Evidence from the Employment Cost Index*." Advances in Macroeconomics, vol. 3, no. 1,2 Jan. 2003at pp. 10–13.

have the funding to do so. At this time, we're not in a position to add funds or full-time positions to support it, so some are exploring ways to use fundraised/camp income to supplement."[69] As late as June 2023, just weeks before the rule change went into effect, the Senior Associate Athletics Director and the Deputy Athletics Director for Columbia University were discussing in emails whether it would be possible, and how, to "determine [each sport's] coaching needs and identify potential funding sources," and whether they would be able to denote the move from volunteer to paid position as a "promotion," because if they opened up any full-time positions, they would "need to do a 30 day posting unless we can go the promotions route."[70]

46. Athletics personnel appear to understand that the transition from volunteer coaches to paid positions may not be immediate. In an email among employees of the Southeastern Conference ("SEC"), discussing a 2019 proposal to end the Volunteer Coach Rule and increase the number of unrestricted coaches for baseball and softball, David Baston writes, "While most in the SEC will likely make it a full-time position, many schools may want to start with a no pay or part-time pay and continue to transition to a full-time position."[71]

47. An Executive Associate Athletic Director at the University of Florida described it as "a shock to the system to have all those potential hires hitting the budget all at once."[72] At her deposition, she agreed that it "might be difficult for member schools to fully accommodate the Volunteer Coach Rule all at once."[73] This email, written in October 2022, also described the end of the Volunteer Coach Rule as "one of those thing that everyone knows is hanging out there but

[69] COLON_CONFERENCE_0000101686 at -87.

[70] COLON_CONFERENCE_0000206202.

[71] SEC_COLONSMART0010458 at -59.

[72] SEC_COLONSMART0006211.

[73] Tealer Depo. at 133:25-134:3.

not fully tracking on in terms of timing,"[74] which at her deposition she agreed meant that "not all DI schools realized the impending effective date was coming up or would be coming up on July 1, 2023."[75] She further testified that she was emailing with other individuals at her University about the end of the Volunteer Coach Rule in October, 2022: "Just something to keep on our radar for budget purposes. The volunteer coach category is going away."[76] Because her University was "attentive to the effective date"[77] of the rule change, it was able to make changes prior to the end of the University budgeting process, which ended in May 2023.[78] The University of Florida then hired on several former volunteer coaches as Assistant Coach I, at a salary of between $35,000 and $45,000 per year.[79]

48. Because of the complexity in changing university budgets, and potentially complicated hiring rules that govern universities, many NCAA member schools may not have had time to react to the NCAA's 2023 rule change eliminating compensation restrictions in time for the 2023-24 academic year.

49. Furthermore, the data I have received from NCAA member institutions were provided subject to subpoenas that were issued between December 2023 and September 2024, and answers were provided beginning in January 2024, a process which is ongoing. At this time, some schools have not fully responded to the subpoenas, and of the schools who have provided responses, some schools did not provide any information on coach pay for the 2023-2024 period.

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[74] SEC_COLONSMART0006211.

[75] Tealer Depo. at 187:13-17.

[76] UF 002788.

[77] Tealer Depo. at 187:18-23.

[78] Tealer Depo. at 195:13-18.

[79] UF 004035 and UF 003863 at -64.

3. Lingering Effects of Cartels

50. Even after a collusive agreement on prices (including wages) has formally ended, the effects of the conspiracy may continue. The American Bar Association's Econometrics handbook notes that "it is possible that the effects of the anticompetitive conduct at issue last beyond the time when the conduct actually ended."[80] Finkelstein and Levenbach (1983) note that though the end of a conspiracy is "usually a fairly dramatic event," in most cases "it is argued that there is a transition period in which prices are still affected by the residue of the conspiratorial activities."[81] Harrington (2023) describes the phenomenon of "residual collusion," which he defines as "the continuation of supracompetitive prices after a cartel has been shut down."[82] In a wage-fixing context, the parallel residual collusion would be a continuation of below-competitive wages for a period of time after the dissolution of a wage-fixing conspiracy. Here, there has been a nearly thirty-year history of the presence of a position deemed "volunteer coach" coupled with an outright ban on compensating these individuals at all. It is likely that the effect of this rule did not end instantaneously with a rule change.

51. Additionally, the economics literature indicates that using a post-collusion period as a benchmark may tend to understate damages (and so is conservative): "standard methods for calculating antitrust damages in price-fixing cases may create a strategic incentive for firms to

[80] ABA Section of Antitrust Law, *Econometrics*, Second Edition (2014) ("ABA Econometrics Handbook") at p. 317.

[81] Finkelstein and Levenbach (1983) at p. 162. *See also* Erickson, W. Bruce. "Price Fixing Conspiracies: Their Long-Term Impact." The Journal of Industrial Economics, Mar.,1977. vol 24, no. 3 pp. 189-202 at p. 201("[P]re-conditions favorable to price leadership or similar methods of oligopolistic coordination are created by prolonged collusion.")

[82] Harrington, Joseph E., Jr. "Competitor Coupons: A Remedy for Residual Collusion." Journal of Competition Law & Economics (2023). vol. 19, pp. 610-627 at 610. Section II of this paper presents a literature review of evidence of residual collusion after the discovery and presumptive end of price-fixing cartels.

price above the non-collusive price after the cartel has been dissolved."[83] The strategic behavior described by Harrington (2004) is that firms "price above the standard non-collusive level, which results in an overestimate of the but-for price and thereby an underestimate of the overcharge and antitrust damages."[84] Translated to a wage-fixing case, the strategic behavior available to the NCAA member institutions would be to continue, post-collusion, to suppress wages below the competitive level, perhaps as low as the collusive price of $0. Doing so would have the effect of reducing estimates of competitive compensation and paid employment levels and hence would decrease measured damages. Taken together, these factors mean that it may take several years for universities and athletic departments to provide sufficient funding to hire and pay workers in the newly-compensable, formerly-volunteer coaching positions. That not all programs hired and paid volunteer coaches as soon as it was permissible under NCAA bylaws to do so is not evidence that if the Volunteer Coach Rule had never been in place that workers in these positions would not have been paid.

52. Nevertheless, though I believe that this market is still moving towards a new competitive equilibrium, I also believe that the schools who have expanded their coaching staff and are paying these coaches are a conservative yet reasonable benchmark for estimating the compensation of class members but-for the restriction on earnings at issue in this case.

IV. All or Nearly All Class Members Were Harmed by the Volunteer Coach Rule

53. Each and every class member was subject to the Volunteer Coach Rule, which restricted their compensation to $0. In addition to not earning pay, they also were not provided

[83] ABA Econometrics Handbook at p. 317, fn 48, describing Harrington, Joseph E. (2004) "Post-Cartel Pricing During Litigation." The Journal of Industrial Economics. vol.LII, no. 4, pp. 517-533.

[84] Harrington (2004). This article is cited by the ABA Econometrics Handbook at p. 317.

benefits (e.g. health insurance or retirement benefits), housing stipends, tuition benefits, or reimbursement for meals other than in limited circumstances.[85]

54. Absent a conspiracy to suppress the compensation of these workers to $0, the market rate would be greater than zero, the amount of compensation received by each class member. Consequently, I conclude that all or nearly all members of the class were harmed by the NCAA's rule preventing the compensation of certain coaches. I come to this conclusion through several pieces of evidence, outlined in the remainder of this section.

55. First, NCAA Division I member schools compensate their coaches. Based on data from the NCAA's MFRS, the average compensation of an unrestricted assistant coach for the programs at issue in this case during the class period was approximately $78,000.[86] I have reviewed several documents indicating that coaches in the "volunteer coach" position were viewed as important members of the coaching staffs on which they worked and, like unrestricted coaches, provided valuable services to their schools.[87] By definition, volunteer coaches provided "coaching services" to the athletics teams for which they were hired which consisted, at a minimum, of "[p]rovid[ing]technical or tactical instruction related to the sport to a student-athlete at any time" or "[m]ak[ing] or assist[ing] in making tactical decisions related to the sport during on-court or on-field practice or competition."[88] Though the NCAA bylaws did not (and do

[85] See Section II.C, above

[86] See ¶ 21, above.

[87] *See* NCAA_SMART-COLON_0145784; NCAA_SMART-COLON_0145980; NCAA_SMART-COLON_0140536; NCAA_SMART-COLON_0146466; NCAA_SMART-COLON_0146006; NCAA_SMART-COLON_0146011; COLON_CONFERENCE_0000206202; NCAA_SMART-COLON_0021762; NCAA_SMART-COLON_0022783; NCAA_SMART-COLON_0021507; NCAA_SMART-COLON_0145841; NCAA_SMART-COLON_0145848; NCAA_SMART-COLON_0145857; NCAA_SMART-COLON_0146038.

[88] NCAA_SMART-COLON_0000001 at 11.01.2 and 11.7.1.1.

not) require that unrestricted coaches be compensated, over 99% of unrestricted coaches in the data I received from member schools received compensation during the class period.[89] This is evidence that absent a rule preventing schools from paying coaches, they *do* pay their coaches.

56. Second, the adoption of the Volunteer Coach Rule was made explicitly with the understanding that the purpose of this rule was to increase the number of coaches without "result[ing] in any significant additional costs to the institution."[90] That is, the explicit purpose of this rule at its adoption was to increase the number of workers available to NCAA Division I member schools without needing to pay them. If the schools believed that the number of people who wanted to provide coaching services for free was so high that these schools could recruit and retain these workers without payment, then they need not have made an agreement to pay these workers $0. Likewise, if the agreed-upon restriction was not necessary to recruit and retain a sufficient number of individuals who wanted to provide coaching services for free, the NCAA and its Division I member schools would not have engaged in the costly exercise of monitoring for and punishing violations of this rule.[91] By pushing for, agreeing to, and monitoring and punishing violations of the Volunteer Coach Rule, the NCAA and its Division I member schools revealed that they do not believe that they could recruit high-quality coaches to work for free absent such an agreement.

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[89] I identified uncompensated unrestricted coaches as individuals who were either explicitly described as being unpaid, or for whom all three compensation fields (namely: salary, health insurance, and total cash compensation) are missing or zero, without a narrative explanation for the reason that it is missing. This count likely overstates the number of uncompensated coaches (and hence is conservative) because it includes individuals who are denoted as being college or university faculty (e.g. a women's golf coach at Lindenwood University, who is reported as earning 0 compensation in connection with coaching, but is described as "faculty position was primary position. Course release for coaching duties."). There are several other instances of this. Additionally, some schools have may left these compensation fields blank because they are unknown, not because these unrestricted coaches actually earned zero compensation.

[90] NCAA_SMART-COLON_0143283 at -510.

[91] See discussion at Section III.A.2 above.

57. Third, the fact that the NCAA places limitations on the number of coaches for each sport is evidence that the demand for coaching staff is high: if there was not a demand for a large number of coaches, there would be no need for coaching caps.[92] If it were the case that NCAA member institutions did not value a marginal coach, there would be no need to place limits on the number of coaches each program is allowed to employ.

58. Fourth, the very fact that NCAA Division I schools hired the class members as coaches — even at $0—indicates that they valued class members' labor at more than $0 and would have been willing to pay more than $0 for their services were it not for the wage-fixing restraint. As a general matter, employers do not hire workers whose marginal product of labor is negative —i.e. workers who do not provide value. A rational employer would simply not hire such a worker. Accordingly, when an employer *does* hire a worker, that indicates that the employer views the worker as adding positive value and would be willing to compensate that worker up to the value the worker provides to the employer. The fact that each class member was hired by and worked for an NCAA Division I school therefore indicates that each one provided labor worth more than $0 to the school for which they worked, providing evidence that absent a rule preventing schools from paying class members, they would have done so.

59. Fifth, the economic concept of internal pay equity is a mechanism that, absent a rule preventing some assistant coaches from being paid, all or nearly all members of the class would have received compensation. Internal equity is simply the idea that workers who perform similar work receive similar pay, and this concept plays a large role in employers' compensation

[92] I understand that the existence of these coaching caps is not an issue in this case.

setting decisions.[93] I have seen evidence that the NCAA and its member institutions are concerned about issues of internal pay equity. For instance, when one University hired a new assistant wrestling coach for a salary of $80,000, they adjusted the pay of an incumbent assistant wrestling coach from $44,582 to $50,000, citing internal equity concerns.[94] In reference to payments to competition officials, the NCAA Division I Men's and Women's Track and Field and Cross Country Committee proposed pay changes for their "tiers" of officials to reduce the gap between these tiers and promote pay equity. They write that "tier one officials would receive a decrease in pay, but members noted the gap between tier one and tier two has grown significantly in the last several years… The sense is this decrease would not be viewed negatively, as those dollars are being reallocated to the tiers two and three officials who have previously been underpaid."[95] In the absence of a specially-designated coaching position that is definitionally unpaid, concerns about internal equity likely would have led to non-zero pay to the lowest-paid coach.

60. Lastly, the economic concept of external pay equity is a mechanism that, absent the Volunteer Coach Rule, would have caused all or nearly all of these workers to receive pay.

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93 *See, e.g.*, Card, David, et al. "Inequality at Work: The Effect of Peer Salaries on Job Satisfaction." American Economics Review, vol. 102, no. 6, Oct. 2012, pp. 2981–3003, which finds that workers who learn that they earn below median pay report lower pay and job satisfaction, while workers who learn that they earn above median pay report no higher satisfaction. Likewise, below-median earners are more likely to report searching for a new job. Employers also are attentive to issues of internal equity to reduce turnover: equity theory posits that employees who perceive themselves as being in an inequitable position seek to reduce this inequity, perhaps by leaving the organization. (*See* Carrell, Michael R., and John E. Dittrich. "Equity Theory: The Recent Literature, Methodological Considerations, and New Directions." The Academy of Management Review, vol. 3, no. 2, Apr. 1978, pp. 202–210, at p. 203. *See also* Torre, Edoardo Della, et al. "Internal and External Equity in Compensation Systems, Organizational Absenteeism and the Role of Explained Inequalities." Human Relations, vol. 68, no. 3, 11 June 2014, pp. 409–440.

94 COLON_SCHLS_0000016398 at 0000016405.

95 COLON_CONFERENCE_0000003058 at _0000003430.

External pay equity is the idea that employers offer similar compensation as other employers for similar work.[96] I have seen evidence that NCAA and its Division I member schools were concerned with external equity. For instance, the NCAA encourages member schools to use its Institutional Performance Program to compare coaches' salaries at their institution to those at other schools.[97] As another example, a presentation prepared for the Mountain West conference, compares compensation paid to coaches at particular schools in the Mountain West conference as well as "Peer Institutions" for several sports.[98] In the presence of the Volunteer Coach Rule, an NCAA Division I school can get away with paying $0 to its lowest-ranked coaches because every other NCAA Division I school is doing the same. If, in the absence of the Volunteer Coach Rule, some schools began compensating these coaches, then those schools will have an easier time recruiting and retaining high-quality coaching talent, who will leave (or refuse to join) schools that do not pay. The schools that do not pay these coaches will then face pressure to compensate their workers if they wish to recruit and retain high-quality coaching talent. If the Volunteer Coach Rule never existed, there likely would have always been at least some schools compensating these workers, which would create competitive pressure for all schools to provide

[96] Dulebohn, James H., and Stephen E. Werling. "Compensation Research Past, Present, and Future." Human Resource Management Review. vol. 17, no. 2, June 2007, pp. 191-207 at 194. ("concerns such as competitiveness, turnover, and compliance to government regulation mandating equal pay for equal work were met with organizations comparing their wage rates for key or benchmark jobs with their competitors and the external market.").

[97] Under the Institutional Performance Program Case Studies, Case Study No. 1 walks the user through how to compare women's basketball assistant coaching salaries to the same at other schools in the rest of the conference. Likewise, Case Study No. 5 walks the user through how to analyze the cost of adding a men's ice hockey team to their athletics department, including the costs of salaries and benefits. *See* http://ncaa.s3.amazonaws.com/files/apps/ipp/resources/CaseStudies_FiscalManagement.pdf.

[98] COLON_CONFERENCE_0000209031. Pay comparisons for football are at pp. 57-58. Pay comparisons for men's basketball are at pp. 75-76. Pay comparisons for women's basketball are at pp. 90-91. Pay comparisons for women's volleyball are at pp. 107-108. *See also* Deposition of Mario Morris as 30(b)(6) Corporate Representative of NCAA at 34-36.

compensation. In fact, I expect that this competitive dynamic is currently at play. As of the time of writing this report, not every program that previously had employed a volunteer coach is compensating these workers yet. For reasons described in Section III.C above, I expect that this process will take several years. That a sport program had not hired and paid a new coach in the 2023-24 academic year (the first year they were permitted to do so, and the most recent year for which counsel for the Plaintiffs requested data from NCAA Division I colleges and universities) does not mean that they will not do so in the coming months and years. Likewise, it does not mean that if the Volunteer Coach Rule had never been put into effect that it is reasonable to believe that any substantial number of the individuals who worked without pay in the real world would have done so in the but-for world.

V. Data

A. Data from Colleges

61. I have received data from Division I colleges and universities, provided pursuant to a subpoena process in connection with this litigation in which Plaintiffs' counsel subpoenaed information from 395 NCAA institutions who fielded Division I athletics teams. These data include, for each program (i.e. sport) for each school, information on the compensation paid to unrestricted coaches and information to identify volunteer coaches for each year. Through this process, to date, I have received and processed data from 243 schools, of which, to date, 175 schools provided usable data from the post-conspiracy period. Of these, I include data from 85 schools in my regression analysis. These schools must have expanded at least one program's coaching staff beyond the caps on unrestricted coaches present during the conspiracy period.

These represent 251 sport programs and 1,522 coach-years.[99] For unrestricted coaches, I have information on their cash compensation (i.e. salary or wages), as well as the value of health insurance and other benefits.

62. Table 4 presents summary statistics for the data provided as a part of this process. In particular, this table presents for each sport program, the number of person-years worked by unrestricted coaches, the number of person-years worked by individuals subject to the Volunteer Coach Rule, the number of school-years offering that program, the number of unique schools offering that program, and the mean compensation of head- and unrestricted assistant coaches. I present this information separately for each sport and overall across all sports.

[99] As I am preparing this report, these data are still arriving. Because these data require cleaning and processing, I have not been able to incorporate all data that have been provided to me. In particular, I have not included all schools in my analysis because of data issues, including but not limited to schools that report large numbers of coaches with missing pay; schools reporting a single compensation or salary number for workers spanning multiple years for all or nearly all coaches; or schools which did not identify the particular year or years associated with coaches' employment; or those that arrived after October 1, 2024.

Table 4: Summary Statistics (2019-2024)

Sport	Countable Coach Years	Volunteer Coach Years	Program-Years	Programs	Mean Head Coach Salary	Mean Assistant Coach Salary
M. Cross Country	4	3	4	1	$39,500	
M. Football	3737	167	310	60	$354,162	$80,468
M. Golf	1055	171	626	127	$89,689	$44,340
M. Gymnastics	84	16	29	6	$115,136	$59,113
M. Ice Hockey	294	52	94	21	$219,049	$99,104
M. Lacrosse	632	124	198	38	$141,054	$65,118
M. Skiing	10	2	5	1	$70,308	
M. Soccer	1655	356	555	110	$94,880	$40,483
M. Swimming & Diving	99	30	40	9	$107,666	$68,789
M. Tennis	862	212	478	98	$89,301	$50,564
M. Track & Field	19	13	6	1	$75,420	$45,704
M. Track (Indoor & Outdoor) & Cross Country	170	68	66	14	$81,608	$56,164
M. Volleyball	132	20	51	11	$64,536	$41,344
M. Water Polo	85	13	35	8	$88,410	$44,952
M. Wrestling	413	86	142	33	$129,530	$69,398
W. Acrobatics and Tumbling	26	0	9	3	$63,230	$23,793
W. Beach Volleyball	230	78	127	30	$53,420	$35,750
W. Bowling	126	23	85	16	$50,397	$23,859
W. Cross Country	10	3	6	1	$41,173	
W. Equestrian	126	12	51	9	$74,792	$48,035
W. Fencing	5	0	1	1	$62,375	$70,433
W. Field Hockey	464	58	156	32	$98,120	$47,602
W. Golf	955	131	541	113	$79,713	$41,603
W. Gymnastics	400	59	122	25	$140,178	$73,825
W. Ice Hockey	195	30	64	14	$112,360	$59,122
W. Lacrosse	845	85	270	56	$91,716	$48,486
W. Rowing	769	135	203	43	$84,952	$43,917
W. Rugby	44	3	22	5	$67,160	$46,713
W. Skiing	10	3	5	1	$85,207	
W. Soccer	2363	397	794	163	$91,127	$41,295
W. Softball	2435	361	782	156	$103,217	$51,626
W. Swimming	118	11	55	12	$64,755	$28,607
W. Swimming & Diving	414	72	141	29	$88,093	$43,308
W. Tennis	1133	291	642	133	$77,778	$43,788
W. Track & Field	77	53	21	4	$60,719	$43,396
W. Track (Indoor & Outdoor) & Cross Country	365	136	115	23	$80,545	$49,331
W. Triathlon	9	0	7	2	$41,806	$16,538
W. Volleyball	2351	404	784	175	$103,747	$48,948
W. Water Polo	134	19	58	13	$69,920	$41,583
W. Wrestling	13	0	7	2	$77,074	$76,125
Rifle	66	2	44	8	$65,244	$52,639
C. Cross Country	54	7	27	5	$65,705	$35,533
C. Fencing	97	26	45	9	$58,508	$46,584
C. Golf	117	6	57	11	$56,709	$27,119
C. Skiing	39	6	15	4	$67,702	$34,754
C. Swimming	188	14	64	12	$54,408	$33,023
C. Swimming & Diving	1148	220	230	46	$96,242	$48,772
C. Tennis	243	31	115	25	$55,740	$25,574
C. Track & Field	783	274	158	33	$121,169	$58,896
C. Track (Indoor & Outdoor) & Cross Country	2758	816	582	113	$89,460	$47,412
C. Water Polo	31	14	17	4	$38,218	$23,230
ALL	28392	5113	9061	1869	$103,345	$54,236

Source: College Subpoena Data

63. Based on my analysis of the schools from which I have received and processed data, there were approximately 4,159 individuals subject to the Volunteer Coach Rule (excluding those individuals who were exclusively engaged in coaching baseball) from March 17, 2019 through July 1, 2023. If I extrapolate this number to the remainder of the NCAA Division I schools, I estimate that there were approximately 6,613 individuals subject to the Volunteer Coach Rule during the same period.

B. NCAA MFRS Data

64. I additionally have data from the NCAA's Membership Financial Reporting System (MFRS) for the academic years 2015-16 through 2022-23. These data are provided by member colleges and universities to the NCAA on an annual basis. These data include information on expenses and revenues for each sport. This includes information on the compensation of the head coach of each sport, as well as the aggregate compensation for all assistant coaches and the number of coaches for each sport.[100] From these data I can infer the average compensation paid to all unrestricted assistant coaches for each sport played at each school in each year.

VI. Methods

65. In order to estimate the pay that individuals in the "volunteer coach" position would have received during the class period but-for an agreement among the NCAA and its member institutions to not compensate them, I have utilized the fact that this restriction was

[100] The coaching salaries reported in the MFRS data separately identify (a) salaries, benefits, and bonuses paid by the university (including gross wages and benefits; taxable and non-taxable benefits including: allowances; speaking fees, stipends, memberships, media income; tuitions reimbursement/exemptions for self or dependent; and earned deferred compensation) and (b) coaching salaries, benefits, and bonuses paid by a third party (including car stipend; country club memberships; allowances for clothing, housing, and entertainment; speaking fees; camp compensation; media income; and shoe and apparel income).

repealed and the number of unrestricted coach slots for each sport was increased in mid-2023. For reasons described in Section III.C, above, I do not expect the effects of the conspiracy to end immediately as of the rescission of the Volunteer Coach Rule. In addition, because the data were collected while the first post-conspiracy year was still ongoing, the data I received do not always include information about the post-conspiracy period and may not reflect all coaches that received compensation in that period. Nevertheless, I do observe some schools hiring into and offering compensation for the newly created unrestricted coach positions. I use this information as the primary basis of my analysis.

A. Calculating "Stepdown"

66. I have categorized sports programs according to how many unrestricted coaches each program is allowed in the period beginning July 1, 2023. I will call this period the "post-conspiracy period" or simply the "post period."[101] These categories are:

- Three coaches: women's bowling, women's beach volleyball, men's or women's cross country, men's or women's fencing, men's or women's golf, rifle; men's or women's skiing, men's or women's swimming, men's or women's tennis, women's triathlon
- Four coaches: women's field hockey; men's or women's gymnastics; men's or women's ice hockey; men's or women's lacrosse; women's rugby; men's or women's soccer; women's softball; men's or women's track and field; men's or women's volleyball; men's or women's water polo; men's or women's wrestling

[101] Correspondingly, I will refer to the period during the Volunteer Coach Rule as the "conspiracy period" or the "during" period.

- Five coaches: women's acrobatics and tumbling; combined cross country;[102] women's equestrian;[103] men's or women's swimming and diving[104]
- Six coaches: combined fencing; combined golf; combined skiing; combined swimming; combined tennis; men's or women's track and field/cross country
- Eight coaches: combined swimming & diving; combined track and field; combined water polo

[102] Here and elsewhere, a "combined" sports program is one in which all coaching staff members in the same sport are involved in practice activities or competition with both the men's and women's team on a daily basis. Combined teams may employ the total number of coaches specified separately for men and for women in that sport. (NCAA_SMART-COLON_0001396 at Rule 11.7.5.1). I first identify a program as potentially combined based on certain conditions (described below) and either the subpoena or MFRS data. I identify a program as being potentially combined based on the subpoena data if any of the following conditions (A) – (C) are true in any year. These are (A) The sport name or coach titles indicate the program is "Men's and Women's"; (B) The sport name or coach titles indicate neither "Men's" nor "Women's" in the school data, and both Men's and Women's sport teams are present in the MFRS data; or (C) There are Men's and Women's programs that have at least one unrestricted coach in common between the Men's and Women's team, based on the subpoena data. (Due to lack of consistency in how names are written, as well as ambiguity in exact employment dates, it is impractical to apply a stricter name-matching rule for identifying combined programs.) I additionally separately identify potentially combined programs based on three rules based on the MFRS data: (D) The MFRS data indicate that both the men and women's teams are coached by head coaches with identical names for each sport; (E) The MFRS data indicate that the aggregate payroll (summing the head coach pay and total pay for all assistant coaches) for the men and women's teams are within $2 of each other; (F) I also rule out programs as being combined if the men's or women's teams have coaches who are indicated in NCAA_SMART-COLON_0234691 as having "full time duties" for that team. If the combined status of a team is in agreement under each of these definitions (A, B, or C, plus all of D, E, and F) to the extent definable due to data availability, then I identify the program as being either combined or not combined based on these rules. For programs for which the combined status of a team is not in agreement under these definitions, a manual analysis of whether a program was combined or not combined was conducted, based on the above criteria and the teams' websites, which list coach rosters for each year.

[103] The specified cap on equestrian coaches is four, with an additional coach allowed for institutions that use both the "hunt seat riding discipline and the western riding discipline." (NCAA_SMART-COLON_0001396 at Rule 11.7.5.2.6)

[104] Men's or women's swimming and diving has a specified cap of four coaches, plus an additional coach if the school has a men's swimming and diving team or a women's swimming and diving team but not both (NCAA_SMART-COLON_0001396 at Rule 11.7.5.2.5).

- Nine coaches: women's rowing[105]
- Twelve coaches: combined track and field/cross country
- Thirteen coaches: FCS football.

67. For the schools that have expanded their paid coaching staff in the post-conspiracy period, I have built a model explaining the "step-down" in pay from the second-lowest-paid position (which corresponds to the lowest paid position during the conspiracy period) to the lowest-paid position. I rank coaches according to their pay (within a given school, sport, and year) and I include indicator variables in the model for each rank. [106] For example, there will be a variable that equals 1 when a coach is the highest paid coach at their school, in their sport, in the given year, and 0 otherwise. Likewise for the second-highest paid coach, and so on down to the lowest-paid coach. The step-down between any two ranks is the difference in the relevant rank-indicator coefficients. In practice, I define rank such that the lowest-paid coach is the omitted, or baseline, category, so that a single coefficient (on the second-lowest-rank indicator) measures the desired step-down described above.

68. I categorize sports into groups according to their post-conspiracy unrestricted coach limit (see above), and I interact indicators for these groups with the rank indicators in my model, which allows me to use a single regression to estimate unique rank coefficients for each group. This model also includes indicator variables for each of the two post-period years 2023 and 2024, and an indicator variable for whether or not the program is a "combined" (men's and women's) program. In this way, I allow the stepdown in pay between the second-lowest paid

[105] The specified cap on rowing coaches is seven, with an additional two coaches available if the institution's rowing program includes both heavyweight rowing and lightweight rowing. (NCAA_SMART-COLON_0001396 at Rule 11.7.5.2.7)

[106] The pay variable I use is coach annual salary.

position and the lowest-paid position to depend on the coach limit in each sport. The results of this analysis are presented in Table 5. Column [1] presents the number of coaches allowed after the end of the Volunteer Coach Rule in 2023; Column [2] presents the regression coefficient, expressed in natural logarithms, that is the relationship between the compensation of the coach in the expanded unrestricted slot(s) (in the post-conspiracy period) and the pay of the next-lowest paid coach that is within the unrestricted coach caps that were in place during the period of the alleged conspiracy.[107] Column [3] presents the t-statistic on this coefficient. In general, using a "one-tailed" test, a t-statistic greater than 1.645 indicates that the difference is statistically significant at the 5% level, and is unlikely to have arisen by chance. This analysis shows that for programs with 3, 4, 5, 9, or 12 allowable coaches in the post-conspiracy period, the estimated coefficient is statistically significantly different from 0 at the 5% level.[108] Column [4] converts the coefficient in Column [2] into a percentage difference. For instance, to interpret the number in the first row, if a sport expanded from two to three slots (e.g. tennis), the average relationship between the pay of the lowest paid coach is 45% lower than the pay of the second-lowest paid coach.

[107] Because most sports saw their unrestricted coach cap expand by exactly one, this is usually equivalent to comparing the pay of the lowest-paid coach to that of the second-to-lowest paid coach.

[108] The remaining programs (with 6, 8, or 13 allowable coaches in the post-conspiracy period) do not have t-statistics that are statistically significantly different from zero at any conventional level. However, as I continue to receive and process data from schools, it is likely that these t-statistics will increase, as a major contributor to the statistical significance of an estimate is the sample size underlying it.

Table 5: Regression Results

Post-Period Restriction	Regression coefficient, for sports with given restriction (in post-period)	T-Statistic	Percentage Stepdown
[1]	[2]	[3]	[4]
3	-0.597	4.38	-45.0%
4	-0.703	8.34	-50.5%
5	-0.946	3.30	-61.2%
6	-0.654	1.51	-48.0%
8	-0.373	1.28	-31.1%
9	-1.454	2.31	-76.6%
12	-0.768	2.18	-53.6%
13	-0.580	1.24	-44.0%

Notes: Based on subpoena data. Model includes indicator variables for each year (2023 or 2024), and an indicator for whether it is a combined program. The stepdown is estimated separately for each post-period restriction size, estimated in a single model.

69. Because I am continuing to receive and process data underlying this model, I expect that the particular stepdown estimates in the table above may change as this process continues. Though this process is ongoing, this is a reasonable approach by which to establish the relationship between the lowest-paid coach (a position which prior to the end of the Volunteer Coach Rule would have received $0), and the compensation of the lowest-paid coach above her.[109] In the remainder of this section I explain how one could use this information to estimate but-for pay (and hence damages) for class members in the absence of the conspiracy.

[109] Ideally I will receive data from every NCAA Division I athletics program. In the event that I do not, it would be possible to estimate a similar relationship between the compensation of the newly-compensated coach position in the post-conspiracy period and the compensation of all assistant coaches under the conspiracy-period unrestricted coach cap. This would allow me to use data from the NCAA's MFRS

B. A Process for Estimating Volunteer Coach But-For Pay

70. In this section, I describe a process for estimating volunteer coach but-for pay during the conspiracy period. Because I am still receiving and processing data, I will describe this process, which is feasible using data and methods that are common to all class members.

71. This method, which I will call the "stepdown method," will use data provided by the schools to establish the rank order of unrestricted coaches in each year of the class period, ranked by compensation within each sport program at each school. This is the same method I used to perform the regression analysis I used to estimate the stepdown function described in the previous subsection. Then, I will do the following:

- If the school has a "full complement" (that is, it meets the cap of allowable unrestricted coaches according to the NCAA bylaws) of coaches earning non-zero compensation (other than the volunteer coach), then I take the lowest-paid coach within that program, and apply the relevant stepdown. For instance, if a men's lacrosse team has a full complement of coaches (3 unrestricted coaches plus a volunteer coach), and the lowest-paid unrestricted coach receives $80,000, reducing this $80,000 by the relevant stepdown (50.5%) implies a but-for compensation of $39,600.[110] The difference between these estimated but-for earnings and the actual volunteer coach earnings ($0), is damages.
- If the school has less than a full complement of coaches earning non-zero compensation (other than the volunteer coach), it is possible to take the compensation of the lowest-paid coach and apply one or more stepdowns to yield

database to estimate the but-for compensation of volunteer coaches in a similar manner as described below.

[110] This is calculated as $80,000 x (1-0.505)

a conservative estimate of but-for pay for the volunteer coach. For instance, if a combined (men's and women's) swimming team, which has a "during" period cap of 4 and a "post" period cap of 6, had two unrestricted coaches and a volunteer coach during the conspiracy period (while the cap on unrestricted coaches was 4), the relevant stepdown is 48%, and the lowest-earnings coach I observe receives $70,000, taking a "double stepdown" would imply that the but-for pay of the volunteer coach would be about $18,900 which is a reasonable, conservative estimate of but-for pay.[111]

- If during the conduct period, a program reports an unrestricted coach who earns no compensation, then the volunteer coach is estimated to also earn no compensation. However, this case is rare: according to my analysis of the schools' data, more than 99% of unrestricted coaches are paid.

VI. Conclusions

72. I conclude based on this analysis that there exists evidence common to the class that the alleged conspiracy suppressed class members' compensation generally, namely at zero. I also find that the alleged conspiracy affected all or nearly all members of the class.

73. I also conclude that the NCAA Division I member schools had sufficient market power to suppress the compensation of the coaches that were subject to the Volunteer Coach Rule. I base this on my conclusion that the compensation of class members was suppressed below the competitive level, namely to $0.

[111] This is calculated as $70,000 x (1-0.48)^2.

74. I also conclude that there exists a reasonable methodology by which to estimate damages using data and methods that are common to the class.

Orley Ashenfelter

November 26, 2024

APPENDIX A

Curriculum Vitae 2024

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CURRENT POSITION:	Joseph Douglas Green 1895 Professor of Economics, Emeritus Senior Scholar in Economics
	And
	American Association of Wine Economists, President
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	Scientific Advisory Committee, Graduate School of Economics, Barcelona
	Co-editor, *Journal of Wine Economics*
	Advisory Board, Stanford University, Institute for Economic Policy Research
	Editorial Board, *Journal of Cultural Economics*
	International Advisory Board, the *Economic and Labour Relations Review*
	Editorial Board, Economic Sciences, PNAS
PREVIOUS POSITIONS:	Western Economic Association International, President-elect, 2017- 2018
	Vice-President, 2015-16, Western Economic Association International
	President, American Economic Association, 2011
	President, American Law and Economics Association, 2010
	President, Society of Labor Economists, 2003
	Editorial Board, the Australian Bulletin of Labour, 2009-2017

Section Editor, Economics, *International Encyclopedia of the Social and Behavior Sciences*

Co-Editor, *American Law and Economics Review,* 1999-2005

Director, Industrial Relations Section, Princeton University

Co-editor, *American Economic Review*, 2001-2002

Editor, *American Economic Review*, 1985-2001.

Meyer Visiting Research Professor, New York University School of Law, 1990.

Meeker Visiting Professor, University of Bristol, 1980-81.
Guggenheim Fellow, 1976-77.

Director, Office of Evaluation, U.S. Department of Labor, 1972-73.

Lecturer, Assistant Professor, and Associate Professor of Economics, Princeton University, 1968-72.

EDUCATION: Claremont McKenna College, B.A. 1964

Princeton University, Ph.D. 1970

AWARDS AND HONORS:

Doctor Honoris Causa of the University of Bordeaux, 2023

Corresponding Fellow of the British Academy, 2018

National Academy of Sciences Elect, 2018

Honorary Degree from Charles University, Czech Republic, January 15th, 2014.

Labor and Employee Relations Academic Fellow, 2010

Distinguished Fellow, American Economic Association, January, 2008.

Recipient of Karel Englis Honorary Medal, awarded by the Academy Council of the Academy of Science of the Czech Republic, May, 2007.

Society of Labor Economists' Jacob Mincer Award, June 4, 2005.

Corresponding Fellow of the Royal Society of Edinburgh, 2005.

IZA Prize in Labor Economics, 2003.

Doctor Honoris Causa, University of Brussels, November 29, 2002

Fellow, American Academy of Arts & Sciences, 1993-

Recipient of the Ragnar Frisch Prize of the Econometric Society, 1984.

Fellow, Econometric Society, 1977.

Guggenheim Fellowship, 1976-77.

BOOKS:

Statistics and Econometrics: Methods and Applications, (with Phillip Levine and David Zimmerman), New York: J. Wiley, 2003.
The Collected Essays of Orley C. Ashenfelter, Volumes I – III, (edited by Kevin Hallock), Cheltenham, England: Edward Elgar Publishing Limited, 1997.

Volume I	Employment, Labor Unions, and Wages
Volume II	Education, Training, and Discrimination
Volume III	Economic Institutions and the Demand and Supply of Labor

VIDEOS/MEDIA:

"Introduction to Wine Economics", YouTube, Harvard Data Science Initiative, July 15, 2024.

Host of podcast "The Work Goes On with Orley Ashenfelter," Industrial Relations Section, Princeton University December 2022 - present.

Profiled on video blog on site of Scott Cunningham, Professor of Economics, Baylor University, "Brittany and Michael Present 5 Pionners in Difference-in-Differences," November 2022.

Podcast on Environmental Insights, hosted by Robert Stavins, Harvard University. "The Economics of Wine: A Conversation with Orley Ashenfelter," March 2022.

Interview with Orley Ashenfelter, PhD labor economist,YouTube, Hosted by Scott Cunningham, Professor of Economics, Baylor University, March 2022.

Podcast on Harvard Data Science Review, "Big Data and Wine" December 2021

"What McDonald's Shows About The Minimum Wage," NPR's' Planet Money, February 2021.

"Economics of Wine," part of the "Economists in the Wild" series produced by Marginal Revolution University, September 2020.

Interviewed on Facebook Live, Sailing Illustrated, "Economics of Wine" January 2020.

"Panel 1: Approaching Labor Market Definition," part of the Public Workshop on Competition in Labor Markets, United States Department of Justice, September 2019.

"Barcelona GSE Scientific Council Roundtable: What has changed?" Barcelona GSE, March 2019.

"Wine, Big Macs and Natural Experiments with Orley Ashenfelter, Princeton University," Interviewed by Liyou Borga, PhD student at the Center for Economic Research and Graduate Education - Economics Institute, 2014.

"Labor Reform and Crisis Recovery – Barcelona GSE," roundtable debate as part of the biennial meeting of the Barcelona GSE Scientific Council, September 2012.

PUBLIC LECTURES:

Introduction to Statistics and Introduction to Econometrics, Lecture, Inaugural Justices Scalia & Ginsburg Judicial Colloquium for State Supreme Court Justices, January 2023, The Law & Economics Center, George Mason University, Honolulu, HI.

Seminar in Applied Economics, February 22, 2022, "Evaluating the Economic effects of Prohibition."

Inaugural Ronald Coase Lecture, June 2021, University of Dundee, Scotland.

Sage Lodge Colloquium, Lecture, September 2021, Law & Economics Center, George Mason University, Pray, MT.

The Douglas H. Ginsburg Judicial Colloquium Series, December 2021, (Introduction to Statistics and Introduction to Econometrics), Law & Economics Center, George Mason University, Palm Beach Florida.

American Bar Association, July 2020, "Information Exchanges: Antitrust, RICO, and Tort Theories of Liability," panel presentation.

United States Department of Justice Public Workshop on Competition in Labor Markets, September 2019, "Approaching Labor Market Definition," panel presentation.

Syracuse University Whitman School of Management, June 2019, "How Competitive are US Labor Markets." Keynote address at the Changing Nature of Work and Workplaces Conference.

Federal Trade Commission, April 2019, “Retrospective Analyses of Mergers,” presented on panel at FTC Hearing #13: Merger Retrospectives.

“Barcelona GSE Scientific Council Roundtable: What has changed?” Panel presentation at Barcelona GSE, March 2019.

Keynes Lecture at the British Royal Academy, November 2018, “The McWages Project: Real Wages Across Space and Time.”

Western Economic Association International Presidential Address, June 2018, “The McWages Project: Real Wages Across Space and Time.”

Kiwanis Club of San Francisco, July 2018, “The World of Wine – an Economist’s Perspective.”

University of Washington, Princeton Club of Western Washington, April 2018, “What Determines Vintage and Vineyard Quality?”

14th International Conference of the Western Economic Association International (WEAI), January 2018, “Roundtable Discussion on Immigration”

Humboldt State University, November 2017, “Wine Economics: the Role of Robert Hodgson.”

Trento Economic Festival, June 2017, “Comparing Real Wages,” Trento, Italy.

Napa Valley Grape Growers, March 2017, “Do Vineyards & Vintage Really Matter?”

The National Economist Club, February 2017, “The Economics of Czech Wine,” presented at the Embassy of the Czech Republic, Washington DC.

Inness College, November 2016, Morley Gunderson Lecture in Labour Economics and Industrial Relations, “Real Wages Over Time and Space (the McWages Project).”

Gustavus College, September 2016, Nobel Conference 52, "Comparing Real Wages around the World: Inequality in Human Wealth."

University of Arizona, April 2016, Economic Seminar Series, "Real Wage Rates Around the World and Over (a Long) Time.”

Vassar College, April 2016, Martin H. Crego Lecture in Economics, "Evaluating the Economic Effects of the Noble Experiment: National Prohibition, 1920-1933.”

Rutgers University, March 2016, Dean's Distinguished Lectureship in Social and Behavioral Sciences, "Real Wage Rates Around the World and Over (a Long) Time."

Maitre Magisterial, Conference in Honor of Danièle Meulders, Université libre de Bruxelles, 2015

Art Investment Forum, Shanghai, China, October 2013, "Trust and Transparency in the Art Market," Keynote Speech.

Shanghai Jiao Tong University, Antai College of Economics and Management, China, October 2013, "Comparing Real Wages".

Sotheby's Institute, London, May 2013, "Trust and Transparency in the Art Market" Plenary Lecture, Conference on Art Markets.

U.S. Department of Labor, November 2012, "History of Program Evaluation," presented at the 75th Anniversary Celebration and Conference.

"Labor Reform and Crisis Recovery – Barcelona GSE," roundtable debate as part of the biennial meeting of the Barcelona GSE Scientific Council, September 2012.

Washington State University, March 2011, "McWages, Cross Country Comparison of Wages", 11th Annual Bertha C. and Roy E. Leigh Distinguished Lecture in Economics

American Bar Association, December 2010, Presentation, Conference on Labor Market Monopsony.

Yale University, November 2010, Plenary Lecture, Conference on Empirical Legal Studies.

San Francisco Federal Reserve Board, July 2010, "Expert Opinion."

Brigham Young University, April 2010, "McWages, Cross Country Comparison of Wages."

Stanford University, March, 2010, "Labor Markets and Their Recovery."

Vanderbilt University, February 2010, "McWages, Cross Country Comparison of Wages."

Law and Economics Workshop, University of California-Berkeley, Berkeley, California, November 16, 2009, "The Effect of Mergers on the Consumer Prices: Evidence from Five Mergers on the Enforcement Margin."

District of Columbia Circuit Conference of the Federal Courts, Nemacolin Woods, Pennsylvania, Conference of the Third Circuit

Judicial Court of Appeals, June 8, 2006, "How Not to Lie with Statistics."

Stanford Institute for Economic Policy Research, Stanford University, Stanford, California, May 30, 2006, "McWages: Cross-Country Comparison of Wages."

The Economics of Art and Culture in Honor of Victor Ginsburg, June 17, 2005, Brussels, Belgium, "Efficiency and Inefficiency in the Market for Bordeaux Wines."

David Hume Institute Lecture, Edinburgh, Scotland, March 24, 20005. “The Evolution of the Global Labor Market: Change vs. Continuity.”

J. Denis Sargan Lecture to the Royal Econometric Society, Nottingham, England, March 23, 2005, “The Value of a Statistical Life: Problems and Prospects.”

Edmund Clarke Distinguished Lecture, October 15, 2004, Queens College, Ontario, "Evolution of the Global Labor Market: Change vs Continuity."

Wei Lun Lecture, December 14, 2000, The Chinese University of Hong Kong, "How Large Is the Economic Payoff to Education?"

Paul Hartman Memorial Lecture, November 1, 1995, University of Illinois at Champaign-Urbana, "How Credible is the Evidence Linking Education and Income?"

Jerome Levy Economics Institute Lecture, November 21, 1995, Bard College, "How Credible Are Estimates of the Economic Returns to Schooling?"

Ida Cordelia Beam Lecture, November 10, 1994, University of Iowa, "Does a College Degree Pay Off? Evidence from Data on Identical Twins."

42nd Joseph Fisher Lecture, October 12, 1993, Adelaide University, Adelaide, Australia, "How Convincing is the Evidence Linking Education and Income?"

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(with A. Krueger) "Theory and Evidence on Employer Collusion in the Franchise Sector," NBER working paper # 24831, July 2018

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(with C. Rouse) "The Payoff to Education," August 1999.

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TESTIMONY BEFORE CONGRESS:

Hearings before the Committee on the Budget, House of Representatives, "Outlook and Budget Levels for FY 1979-80," 96th Congress: 645-659.

OTHER ACTIVITIES:

Member, URB Institutional Review Panel for Human

Subjects Committee, July, 2007.

Selection Committee, Frisch Medal, 2004. President, Society of Labor Economists, 2003. Chairman, Frisch Medal Selection Committee, 2003

Advisory Committee of the Center for Arts and Cultural Policy Studies, Princeton University, 2002-

First Vice President, The Society of Labor Economists, 2002.

Associate Editor, *Journal of Population Economics*, 2001-

Member, Executive and Supervisory Committee, CERGE/EI, Charles University, Prague, Czech Republic, 2001- 2007.

Advisory, Job Opportunity Index National Advisory Board, 2001 – 2003.

Second Vice President, The Society of Labor Economists, 2001

Member, Editorial Board, *Contemporary Economic Policy*, 2000-2001.

Member, Advisory Board, Stanford Institute for Economic Policy Research, 1999 -

Member, Center for Law and Public Affairs, 1999 -

Board Member, American Foundation for the Center for Graduate Education/Economics Institute of the Charles University, Prague, Czech Republic, 1999 – Chairman, 1999-2006.

Member, Board of Editors, *Australian Economic Review* 1997 -

Member, Board of Trustees, Center for Advanced Study in the Behavioral Sciences, Stanford University, 1994-2000.

Member, Committee on Fellowships and Special Projects, Center for Advanced Study in the Behavioral Sciences, Stanford University, 1994-2000.

Member, Board of Directors, American Law and Economics Association, 1994 – 1996.

Faculty Member, Law and Economics Center, George Mason University, Advanced Course for Federal Judges on Statistics, Econometrics, and Financial Data, 1979-

Faculty Member, Law and Economics Center, George Mason University, Economics Institute for Federal Judges, 1982 -

Faculty Member, "Statistics and Expert Testimony," The Federal Judicial Center, 1985.

Faculty Member, "Economics and Expert Testimony," The Federal Judicial Center, 1984.

Benjamin Meeker Visiting Professor, University of Bristol, 1981.

Visiting Scholar, Federal Reserve Bank of Philadelphia, 1979-80.

Recipient of the Ragnar Frisch Prize of the Econometric Society, 1984.

Member, Board of Editors, *Journal of Labor Economics*, 1983-2008

Member, Board of Editors, *Pakistan Development Review*, 1981-1985.

Member, Board of Editors, *Journal of Labor Research*, 1980-89.

Member, Board of Editors, *Journal of Urban Economics*, 1974-1978.

Member, Advisory Board, *Ricerche Economiche: An International Review of Economics*, 1992 – 1993.

Member, Advisory Board, Labour Economics: *An International Journal*, 1992-1997.

Member, Advisory Council of the Cornell Institute for Labor Market Policies, 1991- 2000.

Member, Advisory Board, Center for Economic Policy Research, Stanford University, 1984-1999.

Member, Executive Committee, Conference on Research in Income and Wealth, National Bureau of Economic Research, 1982-1989.

Member, Macro Advisory Panel, National Commission for Employment Policy, 1980-81.

Member, Advisory Board, Institute of Labor Management Relations, Rutgers University, 1979-2001.

Member, Advisory Panel of the American Economic Association to the National Commission on Employment and Unemployment Statistics, 1978-81.

Member, Panel of Statisticians for the National Commission on Employment and Unemployment Statistics, 1977-81.

Fellow, Econometric Society, 1977.

Guggenheim Fellowship, 1976-77.

Confidential Ad Hoc Arbitration Under JAMS Rules

Retained by: Paul Weiss

Deposition: August, 2021

FTC et al. v. Kroger and Albertsons

Testimony: Economic and statistical analysis of the impact of a proposed merger on unionized grocery store labor

Jurisdiction: District of Oregon

Caption: Case No.: 3:24-cv-00347

Retained by: Federal Trade Commission

Deposition: August 2024

Hearing: September 2024

APPENDIX B

Documents Relied Upon

Legal Filings

Colon v. NCAA, No. 1:23-cv-00425-WBS-KJ Second Amended Class Action Complaint

Bates-Numbered Documents

COLON_CONFERENCE_0000003058
COLON_CONFERENCE_0000101686
COLON_CONFERENCE_0000206202
COLON_CONFERENCE_0000209031
COLON_SCHLS_0000016398
NCAA_SMART-COLON_0000001 (2020-2021 NCAA Division I Manual)
NCAA_SMART-COLON_0001396 (2023-2024 NCAA Division I Manual)
NCAA_SMART-COLON_0019078
NCAA_SMART-COLON_0019352
NCAA_SMART-COLON_0019450
NCAA_SMART-COLON_0020323
NCAA_SMART-COLON_0020631
NCAA_SMART-COLON_0020637
NCAA_SMART-COLON_0020925
NCAA_SMART-COLON_0021507
NCAA_SMART-COLON_0021762
NCAA_SMART-COLON_0022783
NCAA_SMART-COLON_0023825
NCAA_SMART-COLON_0027251
NCAA_SMART-COLON_0027589
NCAA_SMART-COLON_0027843
NCAA_SMART-COLON_0028382
NCAA_SMART-COLON_0140536
NCAA_SMART-COLON_0141887
NCAA_SMART-COLON_0143283
NCAA_SMART-COLON_0145784
NCAA_SMART-COLON_0145841
NCAA_SMART-COLON_0145848
NCAA_SMART-COLON_0145857
NCAA_SMART-COLON_0145980
NCAA_SMART-COLON_0146006
NCAA_SMART-COLON_0146011
NCAA_SMART-COLON_0146038
NCAA_SMART-COLON_0146466
SEC_COLONSMART0006211
SEC_COLONSMART0010458
UF 002788

UF 003863
UF 004035

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Since filing my corrected report on November 6, 2024, I have made corrections to my report, none of which change my conclusions. In particular, I have made the following corrections:

1. Corrected identification of combined programs
2. Included Division I programs at non-Division I schools
3. Removed non-Division I program-years
4. Categorized "rifle" programs as co-educational
5. Corrected errors in college names
6. Corrected gender coding for track and field at University of Arkansas, Pine Bluff
7. Corrected sport names in mapping file

These errata are summarized in the following table, and a corrected report is attached.

Location	Original Text	New Text
Paragraph 61	Through this process, to date, I have received and processed data from 243 schools, schools, of which, to date, 176 schools provided usable data from the post-conspiracy period. Of these, I include data from 84 schools in my regression analysis. These schools must have expanded at least one program's coaching staff beyond the caps on unrestricted coaches present during the conspiracy period. These represent 243 sport programs and 1,506 coach-years.	Through this process, to date, I have received and processed data from 243 schools, of which, to date, 175 schools provided usable data from the post-conspiracy period. Of these, I include data from 85 schools in my regression analysis. These schools must have expanded at least one program's coaching staff beyond the caps on unrestricted coaches present during the conspiracy period. These represent 251 sport programs and 1,522 coach-years.
Table 4		Replaced entire Table
Paragraph 63	Based on my analysis of the schools from which I have received and	Based on my analysis of the schools from which I have received and

Location	Original Text	New Text
	processed data, there were approximately 4,272 individuals subject to the Volunteer Coach Rule (excluding those individuals who were exclusively engaged in coaching baseball) from March 17, 2019 through July 1, 2023. If I extrapolate this number to the remainder of the NCAA Division I schools, I estimate that there were approximately 6,730 individuals subject to the Volunteer Coach Rule during the same period.	processed data, there were approximately 4,159 individuals subject to the Volunteer Coach Rule (excluding those individuals who were exclusively engaged in coaching baseball) from March 17, 2019 through July 1, 2023. If I extrapolate this number to the remainder of the NCAA Division I schools, I estimate that there were approximately 6,613 individuals subject to the Volunteer Coach Rule during the same period.
Paragraph 66, bullet 1	Three coaches: women's bowling, women's beach volleyball, men's or women's cross country, men's or women's fencing, men's or women's golf, men's or women's rifle; men's or women's skiing, men's or women's swimming, men's or women's tennis, women's triathlon	Three coaches: women's bowling, women's beach volleyball, men's or women's cross country, men's or women's fencing, men's or women's golf, rifle; men's or women's skiing, men's or women's swimming, men's or women's tennis, women's triathlon

Location	Original Text	New Text
Paragraph 66, bullet 4	Six coaches: combined fencing; combined golf; combined rifle; combined skiing; combined swimming; combined tennis; men's or women's track and field/cross country	Six coaches: combined fencing; combined golf; combined skiing; combined swimming; combined tennis; men's or women's track and field/cross country
Paragraph 66, bullet 5	Eight coaches: combined gymnastics; combined ice hockey; combined lacrosse; combined soccer; combined swimming & diving; combined track and field; combined water polo; combined volleyball; combined wrestling	Eight coaches: combined swimming & diving; combined track and field; combined water polo
Footnote 102	Here and elsewhere, a "combined' sports program is one in which all coaching staff members in the same sport are involved in practice activities or competition with both the men's and women's team on a daily basis. Combined teams may employ the total number of coaches specified separately for men and for women in that sport. (NCAA_SMART-COLON_0001396 at	Here and elsewhere, a "combined" sports program is one in which all coaching staff members in the same sport are involved in practice activities or competition with both the men's and women's team on a daily basis. Combined teams may employ the total number of coaches specified separately for men and for women in that sport. (NCAA_SMART-

Location	Original Text	New Text
	Rule 11.7.5.1). I identify a program as combined if any of the following three criteria are true in at least one year: (A) The sport name or coach titles indicate the program is "Men's and Women's"; (B) The sport name or coach titles indicate neither "Men's" nor "Women's" in the school data, and both Men's and Women's sport teams are present in the MFRS data; or, (C) There are Men's and Women's programs that have at least one unrestricted coach in common between the Men's and Women's team (Due to lack of consistency in how names are written, as well as ambiguity in exact employment dates, it is impractical to apply a stricter name-matching rule for identifying combined programs).	COLON_0001396 at Rule 11.7.5.1). I first identify a program as potentially combined based on certain conditions (described below) and either the subpoena or MFRS data. I identify a program as being potentially combined based on the subpoena data if any of the following conditions (A) – (C) are true in any year. These are (A) The sport name or coach titles indicate the program is "Men's and Women's"; (B) The sport name or coach titles indicate neither "Men's" nor "Women's" in the school data, and both Men's and Women's sport teams are present in the MFRS data; or (C) There are Men's and Women's programs that have at least one unrestricted coach in common between the Men's and Women's team, based on the subpoena data (Due to lack of consistency in how

Location	Original Text	New Text
		names are written, as well as ambiguity in exact employment dates, it is impractical to apply a stricter name-matching rule for identifying combined programs). I additionally separately identify potentially combined programs based on three rules based on the MFRS data: (D) The MFRS data indicate that both the men and women's teams are coached by head coaches with identical names for each sport; (E) The MFRS data indicate that the aggregate payroll (summing the head coach pay and total pay for all assistant coaches) for the men and women's teams are within $2 of each other; (F) I also rule out programs as being combined if the men's or women's teams have coaches who are indicated in NCAA_SMART-COLON_0234691 as having "full time duties" for that team. If the

Location	Original Text	New Text
		combined status of a team is in agreement under each of these definitions (A, B, or C, plus all of D, E, and F) to the extent definable due to data availability, then I identify the program as being either combined or not combined based on these rules. For programs for which the combined status of a team is not in agreement under these definitions, a manual analysis of whether a program was combined or not combined was conducted, based on the above criteria and the teams' websites, which list coach rosters for each year.
Paragraph 68	This analysis shows that for programs with 3, 4, 5, 8, 9, or 12 allowable coaches in the post-conspiracy period, the estimated coefficient is statistically significantly different from 0 at the 5% level.[108] Column [4] converts the coefficient in Column [2] into a	This analysis shows that for programs with 3, 4, 5, 9, or 12 allowable coaches in the post-conspiracy period, the estimated coefficient is statistically significantly different from 0 at the 5% level.[108] Column [4] converts the coefficient in Column [2] into a

Location	Original Text	New Text
	percentage difference. For instance, to interpret the number in the first row, if a sport expanded from two to three slots (e.g. tennis), the average relationship between the pay of the lowest paid coach is 47.8% lower than the pay of the second-lowest paid coach.	percentage difference. For instance, to interpret the number in the first row, if a sport expanded from two to three slots (e.g. tennis), the average relationship between the pay of the lowest paid coach is 45% lower than the pay of the second-lowest paid coach.
Footnote 108	The remaining programs (with 6 or 13 allowable coaches in the post-conspiracy period) do not have t-statistics that are statistically significantly different from zero at any conventional level. However, as I continue to receive and process data from schools, it is likely that these t-statistics will increase, as a major contributor to the statistical significance of an estimate is the sample size underlying it.	The remaining programs (with 6, 8, or 13 allowable coaches in the post-conspiracy period) do not have t-statistics that are statistically significantly different from zero at any conventional level. However, as I continue to receive and process data from schools, it is likely that these t-statistics will increase, as a major contributor to the statistical significance of an estimate is the sample size underlying it.
Table 5		Replaced entire Table

Location	Original Text	New Text
Paragraph 71, bullet 1	For instance, if a men's lacrosse team has a full complement of coaches (3 unrestricted coaches plus a volunteer coach), and the lowest-paid unrestricted coach receives $80,000, reducing this $80,000 by the relevant stepdown (50.6%) implies a but-for compensation of $39,559.	For instance, if a men's lacrosse team has a full complement of coaches (3 unrestricted coaches plus a volunteer coach), and the lowest-paid unrestricted coach receives $80,000, reducing this $80,000 by the relevant stepdown (50.5%) implies a but-for compensation of $39,600.
Footnote 110	This is calculated as $80,000 x (1-0.506)	This is calculated as $80,000 x (1-0.505)
Paragraph 71, bullet 2	For instance, if a combined (men's and women's) swimming team, which has a "during" period cap of 4 and a "post" period cap of 6, had two unrestricted coaches and a volunteer coach during the conspiracy period (while the cap on unrestricted coaches was 4) and the lowest-earnings coach I observe receives $70,000, taking a "double stepdown" would imply that the but-for pay of the volunteer coach would be	For instance, if a combined (men's and women's) swimming team, which has a "during" period cap of 4 and a "post" period cap of 6, had two unrestricted coaches and a volunteer coach during the conspiracy period (while the cap on unrestricted coaches was 4), the relevant stepdown is 48%, and the lowest-earnings coach I observe receives $70,000, taking a "double stepdown" would imply that the but-for pay of the volunteer coach

Location	Original Text	New Text
	$46,750 which is a reasonable, conservative estimate of but-for pay.	would be about $18,900 which is a reasonable, conservative estimate of but-for pay.
Footnote 111	This is calculated as $70,000 x (1-0.183)^2.	This is calculated as $70,000 x (1-0.48)^2.

Orley Ashenfelter
November 26, 2024